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- BAILYN, CHARLES D. Optical Observations of GRO J1655-40 in Quiescence. I. A Precise Mass for the Black Hole Primary: Erratum. Jerome A. Orosz & Charles D. Bailyn. 482, 1086 (1997) (Orig. paper in 477, 876 (1997))
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- BORGANI, STEFANO. Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner.* 482, L121 (1997)
- BORIONE, A. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar. *A. Borione, M. A. Catanese, M. C. Chantell, C. E. Covault, J. W. Cronin, B. E. Fick, L. F. Forson, J. F. Fowler, K. G. Gibbs, M. A. K. Glasmacher, K. D. Green, D. B. Kieda, J. Matthews, B. J. Newport, D. F. Nitz, R. A. Ong, L. J. Rosenberg, D. Sinclair, & J. C. van der Velde.* 481, 313 (1997)
- BORKOWSKI, KAZIMIERZ J. Collimation of Astrophysical Jets: The Proto-Planetary Nebula He 3-1475. *Kazimierz J. Borkowski, John M. Blondin, & J. Patrick Harrington.* 482, L97 (1997)
- BOTHUN, G. D. Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun.* 482, 104 (1997)
- BOTHUN, GREGORY D. NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)

- BOWER, C. R. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- BOWYER, S. The Accreting White Dwarf in the Close Binary EUVE J1016-053. S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan. 482, L73 (1997)
- BOYLE, P. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- BRADLEY, P. A. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- BRADSHAW, C. F. Scorpius X-1: Hints of Periodic Variability at Radio Frequencies. C. F. Bradshaw, B. J. Geldzahler, & E. B. Fomalont. 481, 489 (1997)
- BRAGA, JOÃO. Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding. 482, L171 (1997)
- BRANCH, DAVID. Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. Adam Fisher, David Branch, Peter Nugent, & E. Baron. 481, L89 (1997)
- BRANDENBERGER, ROBERT. The Structure of Cosmic String Wakes. Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson. 482, 22 (1997)
- BREEN, J. X-Ray Emission from the Fornax Cluster. C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx. 482, 143 (1997)
- BROGNIÈRE, D. A New Generation of Photoionization Codes: Three-dimensional Models. The Bipolar Planetary Nebula IC 4406. R. Gruenwald, S. M. Viegas, & D. Brogière. 480, 283 (1997)
- BRONFMAN, L. Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-A. Nyman. 480, 607 (1997)
- BROWN, EDWARD F. Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky. 482, 442 (1997)
- BROWN, THOMAS M. A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman. 482, 685 (1997)
- BRUHWEILER, F. C. Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny. 482, 167 (1997)
- BRUHWEILER, FRED C. Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. X.-P. Cheng, Fred C. Bruhweiler, & James E. Neff. 481, 866 (1997)
- BRUNNER, ROBERT J. Toward More Precise Photometric Redshifts: Calibration via CCD Photometry. Robert J. Brunner, Andrew J. Connolly, Alexander S. Szalay, & Matthew A. Bershad. 482, L21 (1997)
- BUCHALTER, ARI. Rates for Parallax-shifted Microlensing Events from Ground-based Observations of the Galactic Bulge. Ari Buchalter & Marc Kamionkowski. 482, 782 (1997)
- BUCHERT, THOMAS. Beyond Genus Statistics: A Unifying Approach to the Morphology of Cosmic Structure. Jens Schmalzing & Thomas Buchert. 482, L1 (1997)
- BUCKLEY, J. H. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- BUNN, EMORY F. The 4 Year COBE Normalization and Large-Scale Structure. Emory F. Bunn & Martin White. 480, 6 (1997)
- BURDERI, L. Harmonic Coupling of the Red Noise in X-Ray Pulsars. L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi. 481, 943 (1997)
- BURDETT, A. M. See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- BURKE, D. J. Evolution in the X-Ray Cluster Luminosity Function Revisited. R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins. 481, 644 (1997)
- BURKERT, A. Dormant Dwarf Spheroidal Galaxies, Deactivated by Type Ia Supernovae. A. Burkert & P. Ruiz-Lapuente. 480, 297 (1997)
- BURRIS, DEBRA L. The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris. 480, 246 (1997)
- BURROWS, CHRISTOPHER J. See KRIST, JOHN E., et al. Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri.
- BURROWS, DAVID N. ASCA Observations of the Supernova Remnant VRO 42.05.01. Zhiyu Guo & David N. Burrows. 480, L51 (1997)
- BUSS, RICHARD H., JR. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss. 482, 546 (1997)
- BUSSOLETTI, E. Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussolletti, & G. Strazzulla. 481, 545 (1997)
- BUTLER, R. PAUL. A Comparison of the Near-Infrared and Visible Spectra of Three Bright Cepheids. R. Paul Butler & Roger A. Bell. 480, 767 (1997)
- The Planet around 51 Pegasi. Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan. 481, 926 (1997)
- BUTTERWORTH, PAUL. See LEE, BRIAN, et al. Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts.
- CAILLAULT, JEAN-PIERRE. Deep ROSAT HRI Observations of the Orion Nebula Region: Erratum. Marc Gagné, Jean-Pierre Caillault, & John R. Stauffer. 482, 569 (1997) (Orig. paper in 445, 280, 136-D2 (1995))
- CALLANAN, P. J. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles. 481, 267 (1997)
- CALVET, NURIA. Near-Infrared Emission of Protostars. Nuria Calvet, Lee Hartmann, & Stephen E. Strom. 481, 912 (1997)
- CANALIZO, GABRIELA. Spectroscopy of Close Companions to Quasistellar Objects and the Ages of Interaction-induced Starbursts. Gabriela Canalizo & Alan Stockton. 480, L5 (1997)
- CANFIELD, RICHARD C. On the Subphotospheric Origin of Coronal Electric Currents. Alexei A. Pevtsov, Richard C. Canfield, & Alexander N. McClymont. 481, 973 (1997)
- What Is the Spatial Relationship between Hard X-Ray Footpoints and Vertical Electric Currents in Solar Flares? Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi. 482, 490 (1997)
- CANNIZZO, JOHN K. The Nature of the Fluctuations Preceding the Giant Bursts in the Bursting Pulsar GRO J1744-28. John K. Cannizzo. 482, 178 (1997)
- CANUTO, V. M. Compressible Turbulence. V. M. Canuto. 482, 827 (1997)
- CARDELLI, JASON A. The Amount of CH Produced during CH⁺ Synthesis in Interstellar Clouds. S. R. Federman, D. E. Welty, & Jason A. Cardelli. 481, 795 (1997)
- Carbon in the Diffuse Interstellar Medium. Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer. 482, L105 (1997)
- CARDIEL, NICOLÁS. Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González. 481, L19 (1997)
- CARLBERG, R. G. Sinking Satellites and Tilting Disk Galaxies. Siqin Huang & R. G. Carlberg. 480, 503 (1997)
- CARLOTTO, LUCA. Jet Dynamics in Black Hole Fields: A Collimation Mechanism. Fernando de Felice & Luca Carlotto. 481, 116 (1997)
- CARLSSON, MATS. Formation of Solar Calcium H and K Bright Grains. Mats Carlsson & Robert F. Stein. 481, 500 (1997)
- CAROLLO, C. MARCELLA. Ellipticals with Kinetically Distinct Cores: V - I Color Images with WFPC2. C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes. 481, 710 (1997)
- CAROLLO, C. MARCELLO. Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. Marco Spaans & C. Marcello Carollo. 482, L93 (1997)
- CARRASCO, B. E. A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco. 480, L99 (1997)
- CARTER-LEWIS, D. A. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.

- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- CASERTANO, S. Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFPC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ramanunga, R. E. Griffiths, & S. Casertano.* 480, 59 (1997)
- CATANESE, M. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae. *M. Catanese, C. W. Akerlof, S. D. Biller, P. Boyle, J. H. Buckley, D. A. Carter-Lewis, M. F. Cawley, V. Connaughton, B. L. Dingus, D. J. Fegan, C. E. Fichtel, J. P. Finley, J. A. Gaidos, W. K. Gear, R. C. Hartman, A. M. Hillas, F. Krennrich, R. C. Lamb, R. W. Lessard, Y. C. Lin, J. E. McEnery, A. P. Marscher, G. Mohanty, R. Mukherjee, J. Quinn, E. I. Robson, A. J. Rodgers, H. J. Rose, F. W. Samuelson, G. Sembroski, M. S. Schubnell, J. A. Stevens, H. Teräsranita, D. J. Thompson, T. C. Weekes, C. Wilson, & J. Zweerink.* 480, 562 (1997)
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- CATANESE, M. A. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- CATELLI, J. R. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- CAVALIERE, A. Faint Blue Galaxies and Merging: The Evolution of the Luminosity Function. *A. Cavaliere & N. Menci.* 480, 132 (1997)
- CRAWLEY, M. F. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- CEN, RYNYUE. The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kulsrud, Rynye Cen, Jeremiah P. Ostriker, & Dongsu Ryu.* 480, 481 (1997)
- CHABRIER, GILLES. The Fate of Merging White Dwarfs. *Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch.* 481, 355 (1997)
- CHAE, J. Effects of Non-LTE Radiative Loss and Partial Ionization on the Structure of the Transition Region. *J. Chae, H. S. Yun, & A. I. Poland.* 480, 817 (1997)
- CHAKRABARTY, DEEPTO. On the Correlation of Torque and Luminosity in GX 1+4. *Depto Chakraborty, Lars Bildsten, Mark H. Finger, John M. Grunsfeld, Danny T. Koh, Robert W. Nelson, Thomas A. Prince, Brian A. Vaughan, & Robert B. Wilson.* 481, L101 (1997)
- CHAKRABARTY, A. Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata.* 481, 479 (1997)
- CHAMBERLIN, RICHARD A. First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)
- CHANDLER, CLAIRE J. Millimeter and Radio Interferometry of Herbig Ae/Be Stars. *James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler.* 482, 433 (1997)
- CHANDRAN, BENJAMIN D. G. The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. *Benjamin D. G. Chandran.* 482, 156 (1997)
- CHANG, THOMAS H. High-Resolution X-Ray Image of the Hydrogen-deficient Planetary Nebula Abell 30. *You-Hua Chu, Thomas H. Chang, & Gail M. Conway.* 482, 891 (1997)
- CHANTELL, M. C. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- CHAPLIN, W. J. The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New.* 480, L75 (1997)
- CHAPMAN, G. A. Solar Variability and the Relation of Facular to Sunspot Areas during Solar Cycle 22. *G. A. Chapman, A. M. Cookson, & J. J. Dobias.* 482, 541 (1997)
- CHAPMAN, JESSICA M. Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. *Claus Leitherer, Jessica M. Chapman, & Bärbel Koribalski.* 481, 898 (1997)
- CHAPUT, C. J. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- CHARLES, P. A. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)
- CHARNLEY, S. B. Sulfuretted Molecules in Hot Cores. *S. B. Charnley.* 481, 396 (1997)
- Deuterated Methanol in the Orion Compact Ridge. *S. B. Charnley, A. G. G. M. Tielens, & S. D. Rodgers.* 482, L203 (1997)
- CHECHETKIN, V. M. Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. *M. M. Romanova, G. V. Ustyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace.* 482, 708 (1997)
- CHEN, KAIYOU. Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. *Philip Kaaret, Eric C. Ford, & Kaiyou Chen.* 480, L27 (1997)
- CHEN, WAN. Kilohertz Quasi-periodic Oscillation Peak Separation Is Not Constant in Scorpius X-1. *Michiel van der Klis, Rudy A. D. Wijnands, Keith Horne, & Wan Chen.* 481, L97 (1997)
- Black Hole Spin in X-Ray Binaries: Observational Consequences. *S. N. Zhang, Wei Cui, & Wan Chen.* 482, L155 (1997)
- CHENG, E. S. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- CHENG, F. H. Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny.* 480, L17 (1997)
- CHENG, K.-P. Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. *K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff.* 481, 866 (1997)
- CHENG, L. X. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center. *L. X. Cheng, M. Leventhal, D. M. Smith, W. R. Purcell, J. Tueller, A. Connors, D. Dixon, R. L. Kinzer, & J. G. Skibo.* 481, L43 (1997)
- CHERNOFF, DAVID F. An Adaptive Hierarchical Particle-Mesh Code with Isolated Boundary Conditions. *Sergio Gelato, David F. Chernoff, & Ira Wasserman.* 480, 115 (1997)
- Neutron Star Population Dynamics. I. Millisecond Pulsars. *J. M. Cordes & David F. Chernoff.* 482, 971 (1997)
- CHEVRETON, M. See PROVENÇAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- CHIÈZE, JEAN-PIERRE. Self-similar Spherical Collapse Revisited: A Comparison between Gas and Dark Matter Dynamics. *Romain Teyssier, Jean-Pierre Chièze, & Jean-Michel Alimi.* 480, 36 (1997)
- CHIUH, TZIHONG. Fluctuations in Stellar Winds and Their Possible Connections to the Wind Mass Flux. *Tzihong Chiu.* 482, L179 (1997)
- CHRISTENSEN, P. R. A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. *J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen.* 481, 775 (1997)
- CHU, YOU-HUA. Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)
- High-Resolution X-Ray Image of the Hydrogen-deficient Planetary Nebula Abell 30. *You-Hua Chu, Thomas H. Chang, & Gail M. Conway.* 482, 891 (1997)
- CHURCH, M. J. The Cessation of Flickering during Dips in Cygnus X-1. *M. Bałucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue.* 480, L115 (1997)
- CHURCH, S. E. See HOLZAPFEL, W. L., et al. Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163.
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Willbanks, & A. E. Lange.* 481, 35 (1997)
- CHURCHWELL, E. A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner.* 482, 355 (1997)
- CLARKE, JOHN T. See KRIST, JOHN E., et al. Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri.

- CLAVIER, C. F. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- CLEMENS, J. C. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- CLINE, THOMAS. See LEE, BRIAN, et al. Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts.
- COHEN, D. H. Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)
- COHEN, M. H. Scattered Nuclear Continuum and Broad H α in Cygnus A. *P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich.* 482, L37 (1997)
- COHN, H. N. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)
- COLANGELI, L. Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussolotti, & G. Strazzulla.* 481, 545 (1997)
- COLE, D. M. Optical/Near-Infrared Observations of GRO J1744-28. *D. M. Cole, D. E. Vanden Berk, S. A. Sevenson, M. C. Miller, J. M. Quashnock, R. C. Nichol, D. Q. Lamb, K. Hurley, P. Blanco, C. Lidman, & K. Glazebrook.* 480, 377 (1997)
- COLGAN, SEAN W. J. Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. *Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach.* 482, L41 (1997)
- COLLETT, J. L. On the Origin of Cusps in Stellar Systems. *N. W. Evans & J. L. Collett.* 480, L103 (1997)
- COLLEY, WESLEY N. See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- COLLINS, C. A. Evolution in the X-Ray Cluster Luminosity Function Revisited. *R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins.* 481, 644 (1997)
- COMASTRI, ANDREA. On the Soft X-Ray Spectra of γ -loud Blazars. *Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi.* 480, 534 (1997)
- CONNAUGHTON, V. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae. See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- CONNOLLY, ANDREW J. Toward More Precise Photometric Redshifts: Calibration via CCD Photometry. *Robert J. Brunner, Andrew J. Connolly, Alexander S. Szalay, & Matthew A. Bershady.* 482, L21 (1997)
- CONNORS, A. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- CONSIDERE, S. The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considere.* 481, L67 (1997)
- CONTINI, T. The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considere.* 481, L67 (1997)
- CONTINI, THIERRY. Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)
- CONWAY, GAIL M. High-Resolution X-Ray Image of the Hydrogen-deficient Planetary Nebula Abell 30. *You-Hua Chu, Thomas H. Chang, & Gail M. Conway.* 482, 891 (1997)
- COOK, K. H. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- COOKSON, A. M. Solar Variability and the Relation of Facular to Sunspot Areas during Solar Cycle 22. *G. A. Chapman, A. M. Cookson, & J. J. Dobias.* 482, 541 (1997)
- CORBET, ROBIN. Discovery of a New Soft X-Ray Excess in the Spectrum of EXO 0748-676. *Brian Thomas, Robin Corbet, Alan P. Smale, Kazumi Asai, & Tadayasu Dotani.* 480, L21 (1997)
- CORCORAN, M. F. Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata.* 481, 479 (1997)
- CORDES, J. M. Neutron Star Population Dynamics. I. Millisecond Pulsars. *J. M. Cordes & David F. Chernoff.* 482, 971 (1997)
- CORNETT, ROBERT H. See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- COTTINGHAM, D. A. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- COUTU, S. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- COVAULT, C. E. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- COWAN, JOHN J. The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. *John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris.* 480, 246 (1997)
- COWIE, LENNOX L. The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)
- COX, P. Neutral Atomic Carbon in the Globules of the Helix. *K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller.* 482, L101 (1997)
- COZIOL, R. The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considere.* 481, L67 (1997)
- CRAIG, I. J. D. Shear Wave Dissipation in Planar Magnetic X-Points. *I. J. D. Craig & A. N. McClymont.* 481, 996 (1997)
- CRAMPTON, DAVID. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- CRENSHAW, D. M. Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin.* 481, 838 (1997)
- CRISP, DAVID. See KRIST, JOHN E., et al. Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri.
- CRONIN, J. W. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- CUI, WEI. Black Hole Spin in X-Ray Binaries: Observational Consequences. *S. N. Zhang, Wei Cui, & Wan Chen.* 482, L155 (1997)
- Evidence for "Propeller" Effects in X-Ray Pulsars GX 1+4 and GRO J1744-28. *Wei Cui.* 482, L163 (1997)
- CURIEL, SALVADOR. Is SVS 13 the Exciting Source of the HH 7-11 Flow? *Luis F. Rodriguez, Guillem Anglada, & Salvador Curiel.* 480, L125 (1997)
- CUYPERS, J. See KAMBE, E., et al. Multiperiodicity of ζ Ophiuchi from Multisite Observations.
- DA COSTA, LUIZ N. Clustering of Galaxies in the Hubble Deep Field. *Jens V. Villumsen, Wolfram Freudling, & Luiz N. da Costa.* 481, 578 (1997)
- Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner.* 482, L121 (1997)
- DALCANTON, JULIANNE J. Distant Galaxy Clusters Identified from Optical Background Fluctuations. *Dennis Zaritsky, Amy E. Nelson, Julianne J. Dalcanton, & Anthony H. Gonzalez.* 480, L91 (1997)
- The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers.* 482, 659 (1997)
- DALGARN, A. Infrared Response of H $_2$ to X-Rays in Dense Clouds. *S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno.* 481, 282 (1997)
- The Molecular Cloud near the Hard X-Ray Source 1E 1740.7-2942. *Min Yan & A. Dalgarno.* 481, 296 (1997)
- Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. *G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno.* 481, L115 (1997)
- DALY, RUTH A. Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 79 (1997)
- The Gaseous Environments of Powerful Extended Radio Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 96 (1997)
- DAME, T. M. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- D'AMICO, N. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.

- DANCHI, W. C. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- DANKS, ANTHONY C. A Group of Red, Ly α -emitting, High-Redshift Galaxies. *Paul J. Francis, Bruce E. Woodgate, & Anthony C. Danks.* 482, L25 (1997)
- DANLY, LAURA. High-Velocity Rain: The Terminal Velocity Model of Galactic Infall. *Robert A. Benjamin & Laura Danly.* 481, 764 (1997)
- DA SILVA, L. On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)
- HR 6060: The Closest Ever Solar Twin? *G. F. Porto de Mello & L. da Silva.* 482, L89 (1997)
- DAVID, L. X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx.* 482, 143 (1997)
- DAVIDS, BARRY. Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. *William P. Abbott, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein.* 480, 395 (1997)
- DAVIDSEN, ARTHUR F. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss.* 482, 546 (1997)
- A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. *Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman.* 482, 685 (1997)
- DAVIES, R. D. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. *C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones.* 480, L83 (1997)
- DAVIES, R. I. Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
- DAVILA, J. M. Relative Elemental Abundances of the Quiet Solar Corona as Determined by SERTS. *D. A. Falconer, J. M. Davila, & R. J. Thomas.* 482, 1050 (1997)
- DAVOUST, E. The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considère.* 481, L67 (1997)
- DE BERNARDIS, PAOLO. Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperis, Alessandro Melchiorri, & Nicola Vittorio.* 480, 1 (1997)
- DE BLOK, W. J. G. Gas Mass Fractions and the Evolution of Spiral Galaxies. *Stacy S. McGaugh & W. J. G. de Blok.* 481, 689 (1997)
- DECAUX, V. High-Resolution Measurement of the K α Spectrum of Fe XXV–XXVIII: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. *V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs.* 482, 1076 (1997)
- DE FELICE, FERNANDO. Jet Dynamics in Black Hole Fields: A Collimation Mechanism. *Fernando de Felice & Luca Carlotto.* 481, 116 (1997)
- DE GASPERIS, GIANCARLO. Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperis, Alessandro Melchiorri, & Nicola Vittorio.* 480, 1 (1997)
- DE JAGER, O. C. A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis.* 482, 874 (1997)
- DE LA REZA, R. On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)
- DELIYANNIS, CONSTANTINE P. Keck Observation of Lithium in a Cool Halo Dwarf Common Proper-Motion Pair. *Constantine P. Deliyannis & Sean G. Ryan.* 480, L43 (1997)
- Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn.* 480, 784 (1997)
- DELUCA, EDWARD E. The Emergence of Magnetic Flux Loops in Sunlike Stars. *Edward E. DeLuca, Yuhong Fan, & Steven H. Saar.* 481, 369 (1997)
- DE LUCIA, FRANK C. Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia.* 480, 420 (1997)
- DEMARQUE, PIERRE. On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)
- DE NOLFO, G. A. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- DE OLIVEIRA-COSTA, ANGÉLICA. Galactic Microwave Emission at Degree Angular Scales. *Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack.* 482, L17 (1997)
- DEPOY, D. L. Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy.* 481, 179 (1997)
- DE PREE, C. G. Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss.* 482, 307 (1997)
- DEUTSCH, ERIC W. Time-Resolved Ultraviolet Observations of the Globular Cluster X-Ray Source in NGC 6624: The Shortest Known Period Binary System. *Scott F. Anderson, Bruce Margon, Eric W. Deutsch, Ronald A. Downes, & Richard G. Allen.* 482, L69 (1997)
- DEVEREUX, NICK. Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)
- DE VICENTE, P. SiO Emission from the Galactic Center Molecular Clouds. *J. Martin-Pintado, P. de Vicente, A. Fuente, & P. Planesas.* 482, L45 (1997)
- DEVLIN, MARK J. Galactic Microwave Emission at Degree Angular Scales. *Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack.* 482, L17 (1997)
- DEVOST, DANIEL. The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)
- DIAFERIO, ANTONALDO. Infall Regions of Galaxy Clusters. *Antonaldo Diaferio & Margaret J. Geller.* 481, 633 (1997)
- DIAMOND, P. J. Imaging the Magnetic Field in the Atmosphere of TX Camelopardalis. *A. J. Kemball & P. J. Diamond.* 481, L111 (1997)
- Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue.* 482, L113 (1997) (Orig. paper in 0, L0 (0))
- DICKEL, JOHN R. Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)
- DICKEY, JOHN M. A Minnesota Automated Plate Scanner Catalog of Galaxies behind the Virgo Cluster and toward Its Antipode: Erratum. *G. Lyle Hoffman, John M. Dickey, Nanyao Y. Lu, & René Fromhold-Treu.* 480, 447 (1997) (Orig. paper in 473, 822, 331-E2 (1996))
- DICKINSON, MARK. Quasar Absorbing Galaxies at $z \leq 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach.* 480, 568 (1997)
- DI FRANCESCO, JAMES. Millimeter and Radio Interferometry of Herbig Ae/Be Stars. *James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler.* 482, 433 (1997)
- DIGEL, S. W. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- DINGUS, B. L. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- DI STEFANO, R. S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. *W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher.* 481, L93 (1997)
- DIXON, D. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- DIXON, W. VAN DYKE. Reexamining the Lyman Continuum in Starburst Galaxies Observed with the Hopkins Ultraviolet Telescope. *Mark Hurwitz, Patrick Jelinsky, & W. Van Dyke Dixon.* 481, L31 (1997)
- DJORGOVSKI, S. GEORGE. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.

- DOBIAŠ, J. J. Solar Variability and the Relation of Facular to Sunspot Areas during Solar Cycle 22. *G. A. Chapman, A. M. Cookson, & J. J. Dobias*. 482, 541 (1997)
- DODELSON, SCOTT. Determining Cosmic Microwave Background Anisotropies in the Presence of Foregrounds. *Scott Dodelson*. 482, 577 (1997)
- DOMINIK, C. The Physics of Dust Coagulation and the Structure of Dust Aggregates in Space. *C. Dominik & A. G. G. M. Tielens*. 480, 647 (1997)
- DOPITA, MICHAEL. Hot Evolved Objects in Different Parent Galaxies: The Stellar Winds of Three Planetary Nebula Nuclei in the Large Magellanic Cloud. *Luciana Bianchi, Emanuel Vassiliadis, & Michael Dopita*. 480, 290 (1997)
- DORMAN, BEN. UIT Detection of Hot Stars in the Globular Cluster NGC 362. *Ben Dorman, Ronak Y. Shah, Robert W. O'Connell, Wayne B. Landsman, Robert T. Rood, Ralph C. Bohlin, Susan G. Neff, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher*. 480, L31 (1997)
- See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. *Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman*. 482, 685 (1997)
- DOSCHEK, G. A. Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. *G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran*. 482, L109 (1997)
- DOTANI, T. The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue*. 480, L115 (1997)
- DOTANI, TADAYASU. Discovery of a New Soft X-Ray Excess in the Spectrum of EXO 0748-676. *Brian Thomas, Robin Corbet, Alan P. Smale, Kazumi Asai, & Tadayasu Dotani*. 480, L21 (1997)
- DOTTORI, HORACIO. Capture of Field Stars by Globular Clusters in Dense Bulge Regions. *Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbuy*. 482, L49 (1997)
- DOWNES, D. Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford*. 481, L35 (1997)
- DOWNES, RONALD A. Time-Resolved Ultraviolet Observations of the Globular Cluster X-Ray Source in NGC 6624: The Shortest Known Period Binary System. *Scott F. Anderson, Bruce Margon, Eric W. Deutsch, Ronald A. Downes, & Richard G. Allen*. 482, L69 (1997)
- DRAINE, B. T. Radiative Torques on Interstellar Grains. II. Grain Alignment. *B. T. Draine & Joseph C. Weingartner*. 480, 633 (1997)
- DRAKE, N. A. On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin*. 482, L77 (1997)
- DRESSLER, ALAN. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- DRISSEN, LAURENT. The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen*. 482, 765 (1997)
- DUFOR, R. J. High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields*. 481, 174 (1997)
- DULDIG, M. L. Cosmic-Ray Modulation Parameters Derived from the Solar Diurnal Variation. *D. L. Hall, M. L. Duldig, & J. E. Humble*. 482, 1038 (1997)
- DULEY, W. W. Luminescence from Hydrogenated Amorphous Carbon and Extended Red Emission from Nebulae. *W. W. Duley, S. Seahra, & D. A. Williams*. 482, 866 (1997)
- DULL, J. D. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles*. 481, 267 (1997)
- DUNCAN, D. K. Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn*. 480, 784 (1997)
- DUPUIS, J. The Accreting White Dwarf in the Close Binary EUVE J1016-053. *S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan*. 482, L73 (1997)
- DUPUIS, JEAN. Hot White Dwarfs in the *Extreme Ultraviolet Explorer* Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis*. 480, 714 (1997)
- DURRANCE, SAMUEL T. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss*. 482, 546 (1997)
- DUVÉNOIS, M. A. Galactic Cosmic-Ray Manganese: *Ulysses* High-Energy Telescope Results. *M. A. Duvernois*. 481, 241 (1997)
- DWEK, E. A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall*. 480, 173 (1997)
- DYCK, H. M. A Search for Close Bright Companions to AeBe Stars. *N. Pirzkal, E. J. Spillar, & H. M. Dyck*. 481, 392 (1997)
- DYSON, J. E. Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams*. 482, 182 (1997)
- EBISUZAKI, TOSHIKAZU. GRAPE-4: A Massively Parallel Special-Purpose Computer for Collisional N-Body Simulations. *Junichiro Makino, Makoto Taiji, Toshikazu Ebisuzaki, & Daichiro Sugimoto*. 480, 432 (1997)
- EDER, JO ANN. Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder*. 481, 157 (1997)
- EDGAR, RICHARD J. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders*. 482, 881 (1997)
- EFF-DARWICH, A. Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich*. 480, 840 (1997)
- EFREMOV, YURI N. A Universal Formation Mechanism for Open and Globular Clusters in Turbulent Gas. *Bruce G. Elmegreen & Yuri N. Efremov*. 480, 235 (1997)
- EGAMI, EIICHI. The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami*. 481, L9 (1997)
- ELLINGSON, E. The Canada-France-Hawaii Telescope Imaging Survey of BL Lacertae Objects. II. Clustering Environments. *Ron Wurtz, John T. Stocke, E. Ellingson, & H. K. C. Yee*. 480, 547 (1997)
- ELMEGREEN, BRUCE G. A Universal Formation Mechanism for Open and Globular Clusters in Turbulent Gas. *Bruce G. Elmegreen & Yuri N. Efremov*. 480, 235 (1997)
- Cloud/Intercloud Structure from Nonlinear Magnetic Waves. *Bruce G. Elmegreen*. 480, 674 (1997)
- ELSWORTH, Y. The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New*. 480, L75 (1997)
- ELVIS, MARTIN. Deriving the Quasar Luminosity Function from Accretion Disk Instabilities. *Aneta Siemiginowska & Martin Elvis*. 482, L9 (1997)
- EMERICH, C. The Neutral Hydrogen Abundance and Ionization in the Inner Heliosphere. *O. Puyoo, L. Ben Jaffel, & C. Emerich*. 480, 262 (1997)
- ESCALERA, E. Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti*. 482, 41 (1997)
- ESIN, ANN A. Heating and Cooling of Hot Accretion Flows by Nonlocal Radiation. *Ann A. Esin*. 482, 400 (1997)
- ESPOSITO, J. A. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- EVANS, N. W. On the Origin of Cusps in Stellar Systems. *N. W. Evans & J. L. Collett*. 480, L103 (1997)
- EVANS, NEAL J., II. Millimeter and Radio Interferometry of Herbig Ae/Be Stars. *James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stéphane Guilloteau, & Claire J. Chandler*. 482, 433 (1997)
- EVANS, ROBIN W. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.

- EZAWA, H. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- EZUKA, H. Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata. 481, 479 (1997)
- FABER, S. M. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- FADDA, D. Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti. 482, 41 (1997)
- FAHLMAN, G. Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods. 482, 648 (1997)
- FALCONER, D. A. Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu. 482, 519 (1997)
- Relative Elemental Abundances of the Quiet Solar Corona as Determined by SERTS. D. A. Falconer, J. M. Davila, & R. J. Thomas. 482, 1050 (1997)
- FAN, YUHONG. The Emergence of Magnetic Flux Loops in Sunlike Stars. Edward E. DeLuca, Yuhong Fan, & Steven H. Saar. 481, 369 (1997)
- FANELLI, MICHAEL N. See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk. Michael N. Fanelli, William W. Waller, Denise A. Smith, Wendy L. Freedman, Barry Madore, Susan G. Neff, Robert W. O'Connell, Morton S. Roberts, Ralph Bohlin, Andrew M. Smith, & Theodore P. Stecher. 481, 735 (1997)
- FEDERMAN, S. R. The Amount of CH Produced during CH^+ Synthesis in Interstellar Clouds. S. R. Federman, D. E. Welty, & Jason A. Cardelli. 481, 795 (1997)
- FEIGAN, D. J. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- FERGUSON, DONALD. See LEE, BRIAN, et al. Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts.
- FERGUSON, HENRY C. A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman. 482, 685 (1997)
- FERLAND, G. J. Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno. 481, L115 (1997)
- FERRARIO, L. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- FESEN, R. A. Interpretation of Ultraviolet Absorption Lines in SN 1006. A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin. 481, 838 (1997)
- FICHTEL, C. E. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- FICK, B. E. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- FILIPPENKO, ALEXEI V. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- FINGER, MARK H. See CHAKRABARTY, DEEPTO, et al. On the Correlation of Torque and Luminosity in GX 1+4.
- FINLEY, DAVID S. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss. 482, 546 (1997)
- FINLEY, J. P. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- FISCHER, J. Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H_2 . M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer. 480, L133 (1997)
- FISCHER, M. L. See HOLZAPFEL, W. L., et al. Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163.
- FISHER, ADAM. Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. Adam Fisher, David Branch, Peter Nugent, & E. Baron. 481, L89 (1997)
- FITZPATRICK, EDWARD L. The Abundance of Mg in the Interstellar Medium. Edward L. Fitzpatrick. 482, L199 (1997)
- FIXSEN, D. J. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- FLAMMER, K. R. Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. K. R. Flammer, D. A. Mendis, & V. D. Shapiro. 482, 1021 (1997)
- FLORES, H. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- FLYNN, C. A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen. 481, 775 (1997)
- FLYNN, CHRIS. M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. Andrew Gould, John N. Bahcall, & Chris Flynn. 482, 913 (1997)
- FOLTZ, CRAIG B. Hubble Space Telescope Imaging of $z \geq 0.4$ Quasar Galaxies Selected by Quasar Radio and Optical Properties. Eric J. Hooper, Chris D. Impey, & Craig B. Foltz. 480, L95 (1997)
- FOMALONT, E. B. Scorpius X-1: Hints of Periodic Variability at Radio Frequencies. C. F. Bradshaw, B. J. Geldzahler, & E. B. Fomalont. 481, 489 (1997)
- FORBES, DUNCAN A. Ellipticals with Kinematically Distinct Cores: V - I Color Images with WFPC2. C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes. 481, 710 (1997)
- FORD, ERIC C. Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. Philip Kaaret, Eric C. Ford, & Kaiyou Chen. 480, L27 (1997)
- FORD, HOLLAND. Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. Nick Devereux, Holland Ford, & George Jacoby. 481, L71 (1997)
- FORMAN, W. X-Ray Emission from the Fornax Cluster. C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx. 482, 143 (1997)
- FORREST, WILLIAM J. S255-2: The Formation of a Stellar Cluster. Eric M. Howard, Judith L. Pipher, & William J. Forrest. 481, 327 (1997)
- FORTSON, L. F. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- FORVEILLE, T. Neutral Atomic Carbon in the Globules of the Helix. K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller. 482, L101 (1997)
- FOSBURY, R. A. E. Scattered Nuclear Continuum and Broad $\text{H}\alpha$ in Cygnus A. P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich. 482, L37 (1997)
- FOSSATI, GIOVANNI. On the Soft X-Ray Spectra of γ -loud Blazars. Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi. 480, 534 (1997)
- FOWLER, J. F. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- FOX, DEREK W. Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou. 482, L53 (1997)
- FRAIL, D. A. A Radio Survey for Pulsar Wind Nebulae. D. A. Frail & B. R. Scharinghausen. 480, 364 (1997)
- The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806-20. D. A. Frail, G. Vasisht, & S. R. Kulkarni. 480, L129 (1997)
- FRANCIS, PAUL J. A Group of Red, Ly α -emitting, High-Redshift Galaxies. Paul J. Francis, Bruce E. Woodgate, & Anthony C. Danks. 482, L25 (1997)

- FRANK, ADAM. The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank*. 482, 230 (1997)
- FRANK, J. Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter*. 482, 919 (1997)
- FRANK, Z. The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi*. 482, 535 (1997)
- FRANQUEIRA, M. Accretion and UV Variability in BP Tauri. *Ana I. Gómez de Castro & M. Franqueira*. 482, 465 (1997)
- FRANX, M. X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx*. 482, 143 (1997)
- FRANX, MARIJN. Ellipticals with Kinetically Distinct Cores: V - I Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes*. 481, 710 (1997)
- FREEDMAN, WENDY L. Tip of the Red Giant Branch Distances to Galaxies. IV. Sextans B. *Shoko Sakai, Barry F. Madore, & Wendy L. Freedman*. 480, 589 (1997)
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- FREEMAN, K. C. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- FRENK, C. S. A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco*. 480, 199 (1997)
- FREUDLING, WOLFRAM. Clustering of Galaxies in the Hubble Deep Field. *Jens V. Villumsen, Wolfram Freudling, & Luiz N. da Costa*. 481, 578 (1997)
- Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner*. 482, L121 (1997)
- FRIEDMANN, BRIAN C. Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen*. 481, 809 (1997)
- FROGEL, J. A. Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy*. 481, 179 (1997)
- FROMHOLD-TREU, RENÉ. A Minnesota Automated Plate Scanner Catalog of Galaxies behind the Virgo Cluster and toward Its Antipode: Erratum. *G. Lyle Hoffman, John M. Dickey, Nanyao Y. Lu, & René Fromhold-Treu*. 480, 447 (1997) (Orig. paper in 473, 822, 331-E2 (1996))
- FRUSCIONE, A. Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Tiurchuk, & C. von Montigny*. 482, 167 (1997)
- FRYXELL, BRUCE. The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson*. 482, 22 (1997)
- FUENTE, A. SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas*. 482, L45 (1997)
- FUKAZAWA, Y. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- GAALAAS, JOSEPH B. The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank*. 482, 230 (1997)
- GAENSLER, B. M. See BAILLES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- GAGNÉ, MARC. Deep ROSAT HRI Observations of the Orion Nebula Region: Erratum. *Marc Gagné, Jean-Pierre Caillault, & John R. Stauffer*. 482, 569 (1997) (Orig. paper in 445, 280, 136-D2 (1995))
- GAIDOS, J. A. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- GALLAGHER, JOHN S., III. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.
- GALLEGO, JESÚS. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- GALVAN, RICARDO GÉNOVA. Hot White Dwarfs in the *Extreme Ultraviolet Explorer* Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galvan, & Jean Dupuis*. 480, 714 (1997)
- GAO, YU. Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford*. 481, L35 (1997)
- GARDNER, J. P. A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco*. 480, L99 (1997)
- GARNETT, D. R. High Carbon in I Zwicky 18: New Results from *Hubble Space Telescope* Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields*. 481, 174 (1997)
- GARY, DALE E. Imaging the Chromospheric Evaporation of the 1994 June 30 Solar Flare. *Adriana V. R. Silva, Haimin Wang, Dale E. Gary, Nariaki Nitta, & Harold Zirin*. 481, 978 (1997)
- GARY, G. A. Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu*. 482, 519 (1997)
- GAUDI, B. SCOTT. Detection Rates for Close Binaries via Microlensing. *B. Scott Gaudi & Andrew Gould*. 482, 83 (1997)
- GAWISER, ERIC. Contribution of Extragalactic Infrared Sources to Cosmic Microwave Background Foreground Anisotropy. *Eric Gawiser & George F. Smoot*. 480, L1 (1997)
- GEAR, W. K. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- GEBALLE, T. R. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- GEBHARDT, KARL. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- GEHRELS, N. Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels*. 482, 173 (1997)
- GEHRELS, NEIL. See LEE, BRIAN, et al. Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts.
- GEIS, N. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey*. 481, 343 (1997)
- GELATO, SERGIO. An Adaptive Hierarchical Particle-Mesh Code with Isolated Boundary Conditions. *Sergio Gelato, David F. Chernoff, & Ira Wasserman*. 480, 115 (1997)
- GELDZAHLER, B. J. Scorpius X-1: Hints of Periodic Variability at Radio Frequencies. *C. F. Bradshaw, B. J. Geldzahler, & E. B. Fomalont*. 481, 489 (1997)
- GELLER, MARGARET J. Infall Regions of Galaxy Clusters. *Antonaldo Diaferio & Margaret J. Geller*. 481, 633 (1997)
- GEORGIOBIANI, DALI. Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. *William P. Abbott, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein*. 480, 395 (1997)
- GHEZ, A. M. The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck*. 481, 378 (1997)
- GHEZ, ANDREA M. The Planet around 51 Pegasi. *Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan*. 481, 926 (1997)
- GHISELLINI, GABRIELE. On the Soft X-Ray Spectra of γ -loud Blazars. *Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi*. 480, 534 (1997)
- GIBBS, K. G. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- GIBSON, BRAD K. The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould*. 482, 98 (1997)

- GIES, DOUGLAS R. On the Line Profile Variations and Nonradial Pulsation Modes of ζ Tauri (HD 37202). *Anthony B. Kaye & Douglas R. Gies*. 482, 1028 (1997)
- Two-dimensional Ultraviolet Spectral Typing of O-Type Stars: Erratum. *Laura R. Penny, Douglas R. Gies, & William G. Bagnuolo, Jr.* 482, 1085 (1997) (Orig. paper in 460, 906, 84-E13 (1996))
- GIOVANELLI, RICCARDO. Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner*. 482, L121 (1997)
- GIRARDI, M. Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti*. 482, 41 (1997)
- GIRIDHAR, SUNATRA. Abundance Analyses of Field RV Tauri Variables. III. DY Aquilae, SS Geminorum, CT Orionis, and CE Virginis. *Guillermo Gonzalez, David L. Lambert, & Sunatra Giridhar*. 481, 452 (1997)
- GIURICIN, G. Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti*. 482, 41 (1997)
- GLASMACHER, M. A. K. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- GLASSGOLD, A. E. X-Ray Ionization of Protoplanetary Disks. *A. E. Glassgold, J. Najita, & J. Igea*. 480, 344 (1997)
- GLAZEBROOK, K. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- GLORIA, KAREN A. See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- GNEIDING, CLEMENS D. Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding*. 482, L171 (1997)
- GODON, PATRICK. Numerical Modeling of Tidal Effects in Polytopic Accretion Disks. *Patrick Godon*. 480, 329 (1997)
- GOLDEN, R. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- GOLDEN, R. L. See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- GOLDSMITH, PAUL F. Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell*. 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb*. 482, 267 (1997)
- The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. *Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer*. 482, 285 (1997)
- GÓMEZ, J. L. Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Martí, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi*. 482, L33 (1997)
- GÓMEZ DE CASTRO, ANA I. Accretion and UV Variability in BP Tauri. *Ana I. Gómez de Castro & M. Franqueira*. 482, 465 (1997)
- GONZALEZ, ANTHONY H. Distant Galaxy Clusters Identified from Optical Background Fluctuations. *Dennis Zaritsky, Amy E. Nelson, Julianne J. Dalcanton, & Anthony H. Gonzalez*. 480, L91 (1997)
- GONZALEZ, GUILLERMO. Abundance Analyses of Field RV Tauri Variables. III. DY Aquilae, SS Geminorum, CT Orionis, and CE Virginis. *Guillermo Gonzalez, David L. Lambert, & Sunatra Giridhar*. 481, 452 (1997)
- GONZÁLEZ, J. JESÚS. Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. *Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González*. 481, L19 (1997)
- GONZÁLEZ-DELGADO, R. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney*. 482, 114 (1997)
- GOODMAN, ALYSSA A. Kinematics of the Ursa Major Molecular Clouds. *Marc W. Pound & Alyssa A. Goodman*. 482, 334 (1997)
- GOODRICH, R. W. Scattered Nuclear Continuum and Broad H α in Cygnus A. *P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich*. 482, L37 (1997)
- GORGAS, JAVIER. Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. *Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González*. 481, L19 (1997)
- GÓRSKI, KRZYSZTOF M. Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmogonies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Banday, & Krzysztof M. Górski*. 481, 22 (1997)
- GOSS, W. M. VLA H92 α and H115 β Recombination Line Observations of the Galactic Center H II Regions: The Sickle (G0.18-0.04) and the Pistol (G0.15-0.05). *Cornelia C. Lang, W. M. Goss, & D. O. S. Wood*. 481, 1016 (1997) (Orig. paper in 474, 275 (1997))
- High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond*. 482, 186 (1997)
- Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss*. 482, 307 (1997)
- GOTT, J. RICHARD, III. See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- GOTTLIEB, C. A. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H₂C₆ in TMC-1.
- GOTTLÖBER, S. The Power Spectrum of Microwave Background Temperature Anisotropies Measured by the Tenerife Experiment. *F. Atrio-Barandela, S. Goutölber, & J. P. Mücke*. 482, 1 (1997)
- GOULD, ANDREW. Extreme Microlensing toward the Galactic Bulge. *Andrew Gould*. 480, 188 (1997)
- Einstein Radii from Binary-Source Lensing Events. *Cheongho Han & Andrew Gould*. 480, 196 (1997)
- Detection Rates for Close Binaries via Microlensing. *B. Scott Gaudi & Andrew Gould*. 482, 83 (1997)
- M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. *Andrew Gould, John N. Bahcall, & Chris Flynn*. 482, 913 (1997)
- GOUPIL, MARIE-JO. Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ilidio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil*. 480, 794 (1997)
- GOYAL, ASHOK. Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. *J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh*. 481, 954 (1997)
- GRAHAM, J. R. Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens*. 482, 897 (1997)
- GRAHAM, JAMES R. The Planet around 51 Pegasi. *Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan*. 481, 926 (1997)
- GRAUER, A. D. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- GREAVES, J. S. Submillimeter Polarimetry of Class 0 Protostars: Constraints on Magnetized Outflow Models. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson*. 480, 255 (1997)
- GREDEL, R. Infrared Response of H₂ to X-Rays in Dense Clouds. *S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno*. 481, 282 (1997)
- GREDEL, ROLAND. Spectral Analysis Using the Wavelet Transform. *Jean-Luc Starck, Ralf Siebenmorgen, & Roland Gredel*. 482, 1011 (1997)
- GREEN, K. D. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- GREENHILL, L. J. The Distribution of H₂O Maser Emission in the Nucleus of NGC 4945. *L. J. Greenhill, J. M. Moran, & J. R. Herrnstein*. 481, L23 (1997)
- Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue*. 482, L113 (1997) (Orig. paper in 0, L0 (0))
- GREINER, J. ROSAT Detection and High-Precision Localization of X-Ray Sources in the 1978 November 19 Gamma-Ray Burst Error

- Box, M. Bøer, C. Motch, J. Greiner, W. Voges, P. Kahabka, & H. Pedersen. 481, L39 (1997)
- RXTE Observations of QPOs in the Black Hole Candidate GRS 1915+105. E. H. Morgan, R. A. Remillard, & J. Greiner. 482, 993 (1997)
- GRIEST, K. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- GRIFFITHS, R. E. Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFC2 Data. L. W. Neuschaefer, M. Im, K. U. Ratnatunga, R. E. Griffiths, & S. Casertano. 480, 59 (1997)
- GRIFFITHS, RICHARD E. See KRIST, JOHN E., et al. Hubble Space Telescope WFC2 Images of Emission Nebulosity near XZ Tauri.
- GRILLMAIR, CARL. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- GRONWALL, CARYL. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- GRUENWALD, R. A New Generation of Photoionization Codes: Three-dimensional Models. The Bipolar Planetary Nebula IC 4406. R. Gruenwald, S. M. Viegas, & D. Brogière. 480, 283 (1997)
- GRUNSFELD, JOHN M. See CHAKRABARTY, DEEPTO, et al. On the Correlation of Torque and Luminosity in GX 1+4.
- GUAINAZZI, M. Harmonic Coupling of the Red Noise in X-Ray Pulsars. L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi. 481, 943 (1997)
- GÜDEL, MANUEL. Are Coronae of Magnetically Active Stars Heated by Flares? Manuel Güdel. 480, L121 (1997)
- GUERIN, KENNETH P. Carbon in the Diffuse Interstellar Medium. Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer. 482, L105 (1997)
- GUERN, J. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- GUILLOTEAU, STEPHANE. Millimeter and Radio Interferometry of Herbig Ae/Be Stars. James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler. 482, 433 (1997)
- GUINAN, EDWARD. First Hubble Space Telescope Observations of Mira AB Wind-accreting Binary Systems. Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan. 482, L175 (1997)
- GUNJI, S. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- GUO, ZHIYU. ASCA Observations of the Supernova Remnant VRO 42.05.01. Zhiyu Guo & David N. Burrows. 480, L51 (1997)
- GUPTA, V. K. Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh. 481, 954 (1997)
- GUTIÉRREZ, C. M. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones. 480, L83 (1997)
- GUZMÁN, RAFAEL. Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González. 481, L19 (1997)
- See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- HABIB, SALMAN. Chaos and Noise in Galactic Potentials. Salman Habib, Henry E. Kandrup, & M. Elaine Mahon. 480, 155 (1997)
- HACK, WARREN. First Hubble Space Telescope Observations of Mira AB Wind-accreting Binary Systems. Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan. 482, L175 (1997)
- HADRABA, P. Energy Extraction from a Relativistic Accretion Disk by Reflection Effect. P. Hadraba, G. Bao, & E. Østgaard. 480, 324 (1997)
- HAHNELT, MARTIN G. QSO Metal Absorption Systems at High Redshift and the Signature of Hierarchical Galaxy Formation. Michael Rauch, Martin G. Haehnelt, & Matthias Steinmetz. 481, 601 (1997)
- HAGENAAR, HERMANCE J. The Distribution of Cell Sizes of the Solar Chromospheric Network. Hermance J. Hagenaar, Carolus J. Schrijver, & Alan M. Title. 481, 988 (1997)
- HALL, D. L. Cosmic-Ray Modulation Parameters Derived from the Solar Diurnal Variation. D. L. Hall, M. L. Duldig, & J. E. Humble. 482, 1038 (1997)
- HALPERN, J. P. ASCA Observations of PSR 1929+10 and PSR 0950+08. F. Y.-H. Wang & J. P. Halpern. 482, L159 (1997)
- HAMANN, FRED. On the Nature of Ultraviolet and X-Ray Absorption in NGC 3783. Joseph C. Shields & Fred Hamann. 481, 752 (1997)
- HAMILTON, A. J. S. Interpretation of Ultraviolet Absorption Lines in SN 1006. A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin. 481, 838 (1997)
- HAMMER, F. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse. 481, 49 (1997)
- HAN, CHEONGHO. Einstein Radii from Binary-Source Lensing Events. Cheongho Han & Andrew Gould. 480, 196 (1997)
- HANAWA, TOMOYUKI. Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. Fumitaka Nakamura & Tomoyuki Hanawa. 480, 701 (1997)
- HANCOCK, S. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones. 480, L83 (1997)
- HANDA, TOSHIHIRO. An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa. 481, 263 (1997)
- HANSLMEIER, A. Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. J. Hinzberger, M. Vázquez, J. A. Bonet, A. Hanslmeier, & M. Sobotka. 480, 406 (1997)
- HANSTEEN, V. H. The Role of Helium in the Outer Solar Atmosphere. V. H. Hansteen, E. Leer, & T. E. Holzer. 482, 498 (1997)
- HARDING, ALICE K. Pair Production Absorption Troughs in Gamma-Ray Burst Spectra: A Potential Distance Discriminator. Matthew G. Baring & Alice K. Harding. 481, L85 (1997)
- Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. Matthew G. Baring & Alice K. Harding. 482, 372 (1997)
- HARDY, S. J. Langmuir Wave Generation through a Neutrino Beam Instability. S. J. Hardy & D. B. Melrose. 480, 705 (1997)
- HARRINGTON, J. PATRICK. Collimation of Astrophysical Jets: The Proto-Planetary Nebula He 3-1475. Kazimierz J. Borkowski, John M. Blondin, & J. Patrick Harrington. 482, L97 (1997)
- HARTIGAN, PATRICK. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders. 482, 881 (1997)
- HARTMAN, R. C. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- The Identification of EGRET Sources with Flat-Spectrum Radio Sources. J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Pamaik. 481, 95 (1997)
- See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Tüarchuk, & C. von Montigny. 482, 167 (1997)
- HARTMAN, ROBERT C. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- HARTMANN, LEE. Near-Infrared Emission of Protostars. Nuria Calvet, Lee Hartmann, & Stephen E. Strom. 481, 912 (1997)
- HARTQUIST, T. W. Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. T. W. Hartquist, J. E. Dyson, & R. J. R. Williams. 482, 182 (1997)
- HARVEY, PAUL M. Millimeter and Radio Interferometry of Herbig Ae/Be Stars. James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler. 482, 433 (1997)
- HASAN, S. S. The Linear Response of a Magnetic Flux Tube to Buffeting by External p -Modes. I. S. S. Hasan. 480, 803 (1997)
- HASEGAWA, TETSUO. Extensive High-Resolution ^{12}CO Imaging of L1641 in Orion. Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato. 481, 302 (1997)

- HAUSER, M. G. A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall.* 480, 173 (1997)
- HAWKINS, M. R. S. Quasar Variability and Gravitational Microlensing. *M. R. S. Hawkins & A. N. Taylor.* 482, L5 (1997)
- HAYASHI, MASAHIKO. Extensive High-Resolution ^{12}CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato.* 481, 302 (1997)
- HAYASHI, T. See OZAKI, MASAO, et al. Interactions of Convecting Magnetic Loops and Arcades.
- HAYNES, MARTHA P. Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner.* 482, L121 (1997)
- HEAVENS, ALAN F. Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? *Max Tegmark, Andy N. Taylor, & Alan F. Heavens.* 480, 22 (1997)
- HECKMAN, T. M. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney.* 482, 114 (1997)
- HEILES, CARL. Tiny-Scale Atomic Structure and the Cold Neutral Medium. *Carl Heiles.* 481, 193 (1997)
- HEINES, ANKE. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- HENRY, G. W. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- HERBST, ERIC. Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia.* 480, 420 (1997)
- HERBST, T. M. The Infrared Companions of T Tauri Stars. *C. D. Koresko, T. M. Herbst, & Ch. Leinert.* 480, 741 (1997)
- HERMANN, BERND. Differences in the Cooling Behavior of Strange Quark Matter Stars and Neutron Stars. *Christoph Schaab, Bernd Hermann, Fridolin Weber, & Manfred K. Weigel.* 480, L111 (1997)
- HERRMANN, F. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)
- Near-Infrared H_2 and Associated O^0 and C^+ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch.* 482, 298 (1997)
- HERRNSTEIN, J. R. The Distribution of H_2O Maser Emission in the Nucleus of NGC 4945. *L. J. Greenhill, J. M. Moran, & J. R. Herrnstein.* 481, L23 (1997)
- Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue.* 482, L113 (1997) (Orig. paper in 0, L0 (0))
- HESTER, J. JEFF. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.
- HILL, JESSE K. See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- HILLAS, A. M. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- HINE, B. P. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- HIRATA, R. See KAMBE, E., et al. Multiperiodicity of ζ Ophiuchi from Multisite Observations.
- Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)
- Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata.* 481, 479 (1997)
- HIRAYAMA, M. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- HIRZBERGER, J. Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. *J. Hirzberger, M. Vázquez, J. A. Bonet, A. Hansmeier, & M. Sobotka.* 480, 406 (1997)
- HJORTH, JENS. Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 75 (1997)
- HOARD, D. W. Observations of the SW Sextantis Star BH Lyncis in a High State. *D. W. Hoard & Paula Szkody.* 481, 433 (1997)
- HOESSEL, JOHN G. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.
- HOFFMAN, G. LYLE. A Minnesota Automated Plate Scanner Catalog of Galaxies behind the Virgo Cluster and toward Its Antipode: Erratum. *G. Lyle Hoffman, John M. Dickey, Nanyao Y. Lu, & René Fromhold-Treu.* 480, 447 (1997) (Orig. paper in 473, 822, 331-E2 (1996))
- HOFFMAN, R. D. Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian.* 482, 951 (1997)
- HOLBERG, J. B. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss.* 482, 546 (1997)
- HOLDEN, B. P. Evolution in the X-Ray Cluster Luminosity Function Revisited. *R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins.* 481, 644 (1997)
- HOLLAND, W. S. Submillimeter Polarimetry of Class 0 Protostars: Constraints on Magnetized Outflow Models. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson.* 480, 255 (1997)
- HOLLENBACH, DAVID J. Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. *Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach.* 482, L41 (1997)
- HOLLIS, J. M. Spatial Resolution of the R Aquarii Binary System. *J. M. Hollis, J. A. Pedehy, & R. G. Lyon.* 482, L85 (1997)
- HOLTZMAN, JON A. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.
- HOLZAPFEL, W. L. Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163. *W. L. Holzapfel, M. Arnaud, P. A. R. Ade, S. E. Church, M. L. Fischer, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 480, 449 (1997)
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 481, 35 (1997)
- HOLZER, T. E. The Role of Helium in the Outer Solar Atmosphere. *V. H. Hansteen, E. Leer, & T. E. Holzer.* 482, 498 (1997)
- HONDA, H. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- HOOPER, ERIC J. *Hubble Space Telescope* Imaging of $z \geq 0.4$ Quasar Galaxies Selected by Quasar Radio and Optical Properties. *Eric J. Hooper, Chris D. Impey, & Craig B. Foltz.* 480, L95 (1997)
- HORIUCHI, R. See OZAKI, MASAO, et al. Interactions of Convecting Magnetic Loops and Arcades.
- HORNE, KEITH. Kiloherz Quasi-periodic Oscillation Peak Separation Is Not Constant in Scorpius X-1. *Michiel van der Klis, Rudy A. D. Wijnands, Keith Horne, & Wan Chen.* 481, L97 (1997)
- HOWARD, ERIC M. S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest.* 481, 327 (1997)
- HOYLAND, R. J. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. *C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones.* 480, L83 (1997)
- HU, ESTHER M. The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)
- HUA, XIN-MIN. Temporal and Spectral Properties of Comptonized Radiation and Its Applications. *Demosthenes Kazanas, Xin-Min Hua, & Lev Titarchuk.* 480, 735 (1997)

- Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk*. 482, L57 (1997)
- HUANG, MIN. Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny*. 480, L17 (1997)
- HUANG, SIQIN. Sinking Satellites and Tilting Disk Galaxies. *Siqin Huang & R. G. Carlberg*. 480, 503 (1997)
- HUBENY, I. Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata*. 481, 467 (1997)
- HUBENY, IVAN. Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny*. 480, L17 (1997)
- HUGGINS, P. J. Neutral Atomic Carbon in the Globules of the Helix. *K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller*. 482, L101 (1997)
- HUGHES, JOHN P. Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. *Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-Å. Nyman*. 480, 607 (1997)
- HUGHES, V. A. An Evolving Radio Source in the Young Star-forming Region Cepheus A. *V. A. Hughes*. 481, 857 (1997)
- HUMBLE, J. E. Cosmic-Ray Modulation Parameters Derived from the Solar Diurnal Variation. *D. L. Hall, M. L. Duldig, & J. E. Humble*. 482, 1038 (1997)
- HUNTER, JAMES H., JR. Kelvin-Helmholtz and Thermal-Dynamic Instabilities with Self-Gravity: A New Gravitational Interface Instability. *James H. Hunter, Jr., Rodney W. Whitaker, & Richard V. E. Lovelace*. 482, 852 (1997)
- HUNTER, S. D. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane. *S. D. Hunter, D. L. Bertsch, J. R. Catelli, T. M. Dame, S. W. Digel, B. L. Dingus, J. A. Esposito, C. E. Fichtel, R. C. Hartman, G. Kanbach, D. A. Kniffen, Y. C. Lin, H. A. Mayer-Hasselwander, P. F. Michelson, C. von Montigny, R. Mukherjee, P. L. Nolan, E. Schneid, P. Sreekumar, P. Thaddeus, & D. J. Thompson*. 481, 205 (1997)
- HURLEY, K. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- HURLEY, KEVIN. See LEE, BRIAN, et al. Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts.
- HURWITZ, MARK. Reexamining the Lyman Continuum in Starburst Galaxies Observed with the Hopkins Ultraviolet Telescope. *Mark Hurwitz, Patrick Jelinsky, & W. Van Dyke Dixon*. 481, L31 (1997)
- HUT, PIET. Merger Rate of Equal-Mass Spherical Galaxies. *Junichiro Makino & Piet Hut*. 481, 83 (1997)
- IBÁÑEZ, J. M^a. Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Marín, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi*. 482, L33 (1997)
- IGEA, J. X-Ray Ionization of Protoplanetary Disks. *A. E. Glassgold, J. Najita, & J. Igea*. 480, 344 (1997)
- IKEBE, Y. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies. *Y. Ikebe, K. Makishima, H. Ezawa, Y. Fukazawa, M. Hirayama, H. Honda, Y. Ishisaki, K. Kikuchi, H. Kubo, T. Murakami, T. Ohashi, T. Takahashi, & K. Yamashita*. 481, 660 (1997)
- ILLARIONOV, ANDREI. On Electrostatic Positron Acceleration in the Accretion Flow onto Neutron Stars. *Roberto Turolla, Silvia Zane, Aldo Treves, & Andrei Illarionov*. 482, 377 (1997)
- ILLINGWORTH, GARTH D. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field. Ellipticals with Kinematically Distinct Cores: $V - I$ Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes*. 481, 710 (1997)
- IM, M. Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFPC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ratnatunga, R. E. Griffiths, & S. Casertano*. 480, 59 (1997)
- IMORI, M. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- IMPEY, C. D. Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun*. 482, 104 (1997)
- IMPEY, CHRIS D. Hubble Space Telescope Imaging of $z \geq 0.4$ Quasar Galaxies Selected by Quasar Radio and Optical Properties. *Eric J. Hooper, Chris D. Impey, & Craig B. Foltz*. 480, L95 (1997)
- INABA, S. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- INMAN, C. A. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- INOUE, H. The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue*. 480, L115 (1997)
- INOUE, M. Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue*. 482, L113 (1997) (Orig. paper in 0, L0 (0))
- INUTSUKA, SHU-ICHIRO. A Production Mechanism for Clusters of Dense Cores. *Shu-ichiro Inutsuka & Shoken M. Miyama*. 480, 681 (1997)
- IRVINE, WILLIAM M. Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell*. 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb*. 482, 267 (1997)
- IRWIN, M. J. Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun*. 482, 104 (1997)
- ISAAK, G. R. The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New*. 480, L75 (1997)
- ISHISAKI, Y. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- ITO, NAOKI. Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuharu Kohyama, & Satoshi Nozawa*. 482, 33 (1997)
- JABLONSKI, FRANCISCO J. Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding*. 482, L171 (1997)
- JACKSON, JAMES M. First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo*. 480, L59 (1997)
- JACOBS, V. L. High-Resolution Measurement of the $K\alpha$ Spectrum of Fe xxv-xviii: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. *V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs*. 482, 1076 (1997)
- JACOBY, GEORGE. Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby*. 481, L71 (1997)
- JAFFE, D. T. Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer*. 480, L133 (1997)
- Near-Infrared H₂ and Associated O⁰ and C⁺ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch*. 482, 298 (1997)
- JELINSKY, PATRICK. Reexamining the Lyman Continuum in Starburst Galaxies Observed with the Hopkins Ultraviolet Telescope. *Mark Hurwitz, Patrick Jelinsky, & W. Van Dyke Dixon*. 481, L31 (1997)
- JERNIGAN, J. G. Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens*. 482, 897 (1997)

- JERNIGAN, J. GARRETT. The Planet around 51 Pegasi. *Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan*. 481, 926 (1997)
- JESSER, W. A. O_2/O_3 Microatmospheres in the Surface of Ganymede. *R. E. Johnson & W. A. Jesser*. 480, L79 (1997)
- JIMÉNEZ, A. Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich*. 480, 840 (1997)
- JIMINEZ, RAUL. Are Low Surface Brightness Disks Young? *Paolo Padoan, Raul Jimenez, & Vincenzo Antonuccio-Delego*. 481, L27 (1997)
- JOHNS-KRULL, C. M. Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata*. 481, 467 (1997)
- JOHNSON, M. A. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- JOHNSON, R. E. O_2/O_3 Microatmospheres in the Surface of Ganymede. *R. E. Johnson & W. A. Jesser*. 480, L79 (1997)
- JOHNSON, W. N. Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels*. 482, 173 (1997)
- JOHNSTON, S. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- JONES, A. W. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. *C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones*. 480, L83 (1997)
- JONES, C. X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx*. 482, 143 (1997)
- JONES, HUGH R. A. Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji*. 480, L39 (1997)
- JONES, T. W. The Density Spike in Cosmic-Ray-modified Shocks: Formation, Evolution, and Instability. *Byung-Il Jun & T. W. Jones*. 481, 253 (1997)
- The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank*. 482, 230 (1997)
- JUN, BYUNG-IL. The Density Spike in Cosmic-Ray-modified Shocks: Formation, Evolution, and Instability. *Byung-Il Jun & T. W. Jones*. 481, 253 (1997)
- KAARET, PHILIP. Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. *Philip Kaaret, Eric C. Ford, & Kaiyou Chen*. 480, L27 (1997)
- KAFATOS, M. Contemporaneous *IUE*, *EUVE*, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny*. 482, 167 (1997)
- KAGEYAMA, A. See OZAKI, MASAO, et al. Interactions of Convecting Magnetic Loops and Arcades.
- KAHABKA, P. *ROSAT* Detection and High-Precision Localization of X-Ray Sources in the 1978 November 19 Gamma-Ray Burst Error Box. *M. Böer, C. Motch, J. Greiner, W. Voges, P. Kahabka, & H. Pedersen*. 481, L39 (1997)
- KAHN, S. M. High-Resolution Measurement of the $K\alpha$ Spectrum of Fe XXV-XXVIII: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. *V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs*. 482, 1076 (1997)
- KAISER, N. Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. *G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods*. 482, 648 (1997)
- KAMAE, T. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- KAMAYA, HIDEYUKI. Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya*. 480, 694 (1997)
- KAMBE, E. Multiperiodicity of ζ Ophiuchi from Multisite Observations. *E. Kambe, R. Hirata, H. Ando, J. Cuypers, M. Katoh, E. J. Kennelly, G. A. H. Walker, S. Štefl, & A. E. Tarasov*. 481, 406 (1997)
- KAMIONKOWSKI, MARC. Rates for Parallax-shifted Microlensing Events from Ground-based Observations of the Galactic Bulge. *Ari Buchalter & Marc Kamionkowski*. 482, 782 (1997)
- KANBACH, G. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- KANDRUP, HENRY E. Chaos and Noise in Galactic Potentials. *Salman Habib, Henry E. Kandrup, & M. Elaine Mahon*. 480, 155 (1997)
- KANEDA, H. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- KAROVSKA, MARGARITA. First *Hubble Space Telescope* Observations of Mira AB Wind-accreting Binary Systems. *Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan*. 482, L175 (1997)
- KATOH, M. See KAMBE, E., et al. Multiperiodicity of ζ Ophiuchi from Multisite Observations.
- KAYE, ANTHONY B. On the Line Profile Variations and Nonradial Pulsation Modes of ζ Tauri (HD 37202). *Anthony B. Kaye & Douglas R. Gies*. 482, 1028 (1997)
- KAZANAS, DEMOSTHENES. Temporal and Spectral Properties of Comptonized Radiation and Its Applications. *Demosthenes Kazanas, Xin-Min Hua, & Lev Titarchuk*. 480, 735 (1997)
- Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk*. 482, L57 (1997)
- KEETON, C. R. Shear and Ellipticity in Gravitational Lenses. *C. R. Keeton, C. S. Kochanek, & U. Seljak*. 482, 604 (1997)
- KEIL, S. L. Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk*. 482, 1065 (1997)
- KELSALL, T. A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall*. 480, 173 (1997)
- KEMBALL, A. J. Imaging the Magnetic Field in the Atmosphere of TX Camelopardalis. *A. J. Kemball & P. J. Diamond*. 481, L111 (1997)
- KENNELLY, E. J. See KAMBE, E., et al. Multiperiodicity of ζ Ophiuchi from Multisite Observations.
- KEPLER, S. O. See PROVENÇAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- KERVIN, P. W. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- KETO, E. Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens*. 482, 897 (1997)
- KIEDA, D. B. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- KIKUCHI, K. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- KIM, YONG-CHEOL. On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim*. 482, 677 (1997)
- KIMBELL, B. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- KIMBELL, B. L. See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- KIMBLE, RANDY A. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss*. 482, 546 (1997)
- KIMURA, N. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- KING, A. R. The Formation of Low-Mass Transient X-Ray Binaries. *A. R. King & U. Kolb*. 481, 918 (1997)
- Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter*. 482, 919 (1997)
- KING, IVAN R. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- KINNEY, A. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney*. 482, 114 (1997)

- KINZER, R. L. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- KLEINMAN, S. J. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- KLYPIN, ANATOLY A. Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . *Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack*. 480, 43 (1997)
- KNAPP, J. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- KNIFFEN, D. A. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- KNOX, LLOYD. Cosmic Microwave Background Anisotropy Observing Strategy Assessment. *Lloyd Knox*. 480, 72 (1997)
- KOBAYASHI, NAOTO. Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato*. 481, 936 (1997)
- KOCHANEK, C. S. Shear and Ellipticity in Gravitational Lenses. *C. R. Keeton, C. S. Kochanek, & U. Seljak*. 482, 604 (1997)
- KOGUT, A. Galactic Microwave Emission at Degree Angular Scales. *Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack*. 482, L17 (1997)
- KOH, DANNY T. See CHAKRABARTY, DEEPTO, et al. On the Correlation of Torque and Luminosity in GX 1+4.
- KOHYAMA, YASUOHARU. Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuoharu Kohyama, & Satoshi Nozawa*. 482, 33 (1997)
- KOJIMA, MAKOTO. Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi*. 481, 132 (1997)
- KOLB, U. The Formation of Low-Mass Transient X-Ray Binaries. *A. R. King & U. Kolb*. 481, 918 (1997)
- Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter*. 482, 919 (1997)
- KOLDOBA, A. V. Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. *M. M. Romanova, G. V. Ustyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace*. 482, 708 (1997)
- KOMMERS, JEFFERSON M. Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. *Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou*. 482, L53 (1997)
- KOO, DAVID C. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- KORATKAR, A. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney*. 482, 114 (1997)
- KORESKO, C. D. The Infrared Companions of T Tauri Stars. *C. D. Koresko, T. M. Herbst, & Ch. Leinert*. 480, 741 (1997)
- KORIBALSKI, BÄRBE. Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. *Claus Leitherer, Jessica M. Chapman, & Bärbel Koribalski*. 481, 898 (1997)
- KORISTA, K. T. Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. *G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno*. 481, L115 (1997)
- KORMENDY, JOHN. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B. *John Kormendy, Ralf Bender, John Magorrian, Scott Tremaine, Karl Gebhardt, Douglas Richstone, Alan Dressler, S. M. Faber, Carl Grillmair, & Tod R. Lauer*. 482, L139 (1997)
- KOSOVICHEV, A. G. Detection of Zonal Shear Flows beneath the Sun's Surface from f-Mode Frequency Splitting. *A. G. Kosovichev & J. Schou*. 482, L207 (1997)
- KOSUGI, TAKEO. What Is the Spatial Relationship between Hard X-Ray Footprints and Vertical Electric Currents in Solar Flares? *Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi*. 482, 490 (1997)
- KOUVELIOTOU, CHRYSOA. Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. *Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou*. 482, L53 (1997)
- KOVACS, A. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- KOWITT, M. S. A Detection of Bright Features in the Microwave Background. *M. S. Kowitt, E. S. Cheng, D. A. Cottingham, D. J. Fixsen, C. A. Inman, S. S. Meyer, L. A. Page, J. L. Puchalla, J. E. Ruhl, & R. F. Silverberg*. 482, 17 (1997)
- KOYAMA, K. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- X-Ray Properties of Early-Type Galaxies as Observed with ASCA. *H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita*. 482, 133 (1997)
- KRAUSS, LAWRENCE M. Old Galaxies at High Redshift and the Cosmological Constant. *Lawrence M. Krauss*. 480, 456 (1997)
- KRENNRICH, F. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- Detection of Multi-TeV Emission from Markarian 421. *F. Krennrich, C. W. Akerlof, J. H. Buckley, A. M. Burdett, D. A. Carter-Lewis, M. F. Cawley, M. Cataneese, V. Connaughton, D. J. Fegan, J. P. Finley, J. A. Gaidos, R. C. Lamb, R. Lessard, J. E. McEnery, G. Mohanty, J. Quinn, A. J. Rodgers, H. J. Rose, M. S. Schubnell, G. H. Sembroski, T. C. Weekes, C. Wilson, & J. Zweerink*. 481, 758 (1997)
- KRISHNAMURTHI, ANITA. Theoretical Models of the Angular Momentum Evolution of Solar-Type Stars. *Anita Krishnamurthi, M. H. Pinsonneault, S. Barnes, & S. Sofia*. 480, 303 (1997)
- KRISHNA SWAMY, K. S. On the Rotational Population Distribution of C_2 in Comets. *K. S. Krishna Swamy*. 481, 1004 (1997)
- KRISS, GERARD A. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss*. 482, 546 (1997)
- KRIST, JOHN E. Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri. *John E. Krist, Christopher J. Burrows, Karl R. Stapelfeldt, Gilda E. Ballester, John T. Clarke, David Crisp, Robin W. Evans, John S. Gallagher III, Richard E. Griffiths, J. Jeff Hester, Jon A. Holtzman, John G. Hoessel, Jeremy R. Mould, Paul A. Scowen, John T. Trauger, Alan M. Watson, & James A. Westphal*. 481, 447 (1997)
- KROLIK, J. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney*. 482, 114 (1997)
- KRUK, JEFFREY W. Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss*. 482, 546 (1997)
- KUBO, H. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- KUCHINSKI, L. E. Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy*. 481, 179 (1997)
- KUDRITZKI, ROLF-PETER. Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls*. 482, 757 (1997)
- KUIPER, T. B. H. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- KULKARNI, S. R. The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806-20. *D. A. Frail, G. Vasishth, & S. R. Kulkarni*. 480, L129 (1997)
- Observations of Two Millisecond Pulsars in the Globular Cluster NGC 5904. *S. B. Anderson, A. Wolszczan, S. R. Kulkarni, & T. A. Prince*. 482, 870 (1997)
- KULSRUD, RUSSELL M. The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kulsrud, Renyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu*. 480, 481 (1997)
- KUNDIĆ, TOMISLAV. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant. *Tomislav Kundić, Edwin L. Turner, Wesley N. Colley,*

- J. Richard Gott III, James E. Rhoads, Yun Wang, Louis E. Bergeron, Karen A. Gloria, Daniel C. Long, Sangeeta Malhotra, & Joachim Wambsganss. 482, 68 (1997)
- The Quasar-Quasar Correlation Function in the Palomar Transient Survey. Tomislav Kundic. 482, 631 (1997)
- KUNTH, DANIEL. Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. Daniel Schaefer, Thierry Contini, Daniel Kunth, & Georges Meynet. 481, L75 (1997)
- KURFESS, J. D. Long-Term Monitoring of NGC 4151 by OSSE. W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels. 482, 173 (1997)
- LA BARBERA, N. Harmonic Coupling of the Red Noise in X-Ray Pulsars. L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi. 481, 943 (1997)
- LABRADOR, A. W. Effects of Solar Modulation on the Low-Energy Cosmic-Ray Antiproton/Proton Ratio. A. W. Labrador & R. A. Mewaldt. 480, 371 (1997)
- LAGUNA, P. Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros. 482, 942 (1997)
- LAMB, D. Q. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- LAMB, R. C. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- LAMBAS, DIEGO G. The Dependence of Galaxy Clustering on Luminosity. Carlos A. Valotto & Diego G. Lambas. 481, 594 (1997)
- LAMBERT, DAVID L. Abundance Analyses of Field RV Tauri Variables. III. DY Aquilae, SS Geminorum, CT Orionis, and CE Virginis. Guillermo Gonzalez, David L. Lambert, & Sunara Giridhar. 481, 452 (1997)
- LAMING, J. M. Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran. 482, L109 (1997)
- LANDI DEGL'INNOCENTI, EGIDIO. Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. Javier Trujillo Bueno & Egidio Landi Degl'Innocenti. 482, L183 (1997)
- LANDSMAN, W. S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher. 481, L93 (1997)
- LANDSMAN, WAYNE B. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- LANE, ADAIR P. First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo. 480, L59 (1997)
- LANG, CORNELIA C. VLA H92 α and H115 β Recombination Line Observations of the Galactic Center H II Regions: The Sickle (G0.18-0.04) and the Pistol (G0.15-0.05). Cornelia C. Lang, W. M. Goss, & D. O. S. Wood. 481, 1016 (1997) (Orig. paper in 474, 275 (1997))
- LANGE, A. E. See HOLZAPFEL, W. L., et al. Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163.
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange. 481, 35 (1997)
- LANGER, W. D. First Astronomical Detection of the Cumulene Carbon Chain Molecule H₂C₆ in TMC-1. W. D. Langer, T. Velusamy, T. B. H. Kuiper, R. Peng, M. C. McCarthy, M. J. Travers, A. Kovács, C. A. Gottlieb, & P. Thaddeus. 480, L63 (1997)
- LANGER, WILLIAM D. The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer. 482, 285 (1997)
- The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. Richard P. Nelson & William D. Langer. 482, 796 (1997)
- LANGHOFF, STEPHEN R. Theoretical Study of the Spectroscopy of TiO. Stephen R. Langhoff. 481, 1007 (1997)
- LASENBY, A. N. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones. 480, L83 (1997)
- LAUER, TOD R. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- LAUGHLIN, GREGORY. The End of the Main Sequence. Gregory Laughlin, Peter Bodenheimer, & Fred C. Adams. 482, 420 (1997)
- LEE, BRIAN. Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts. Brian Lee, Carl Akerlof, David Band, Scott Barthelmy, Paul Butterworth, Thomas Cline, Donald Ferguson, Neil Gehrels, & Kevin Hurley. 482, L125 (1997)
- LEER, E. The Role of Helium in the Outer Solar Atmosphere. V. H. Hansteen, E. Leer, & T. E. Holzer. 482, 498 (1997)
- LE FEVRE, O. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- LEHNER, M. J. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- LEHTO, HARRY J. Outbursts in OJ 287: A New Test for the General Theory of Relativity. Mauri J. Valtonen & Harry J. Lehto. 481, L5 (1997)
- LEIGHLY, KAREN M. Evidence for Nonlinear X-Ray Variability from the Broad-Line Radio Galaxy 3C 390.3. Karen M. Leighly & Paul T. O'Brien. 481, L15 (1997)
- LEINERT, CH. The Infrared Companions of T Tauri Stars. C. D. Koresko, T. M. Herbst, & Ch. Leinert. 480, 741 (1997)
- LEITHERER, C. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney. 482, 114 (1997)
- LEITHERER, CLAUD. Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. Claus Leitherer, Jessica M. Chapman, & Bärbel Koribalski. 481, 898 (1997)
- LEMAIRE, P. Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran. 482, L109 (1997)
- LENNON, DANIEL J. Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls. 482, 757 (1997)
- LEPP, S. Infrared Response of H₂ to X-Rays in Dense Clouds. S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno. 481, 282 (1997)
- LESSARD, R. See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- LESSARD, R. W. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- LEVENTHAL, M. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- LEWIN, WALTER H. G. Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou. 482, L53 (1997)
- LI, B. Z. Laboratory Detection and Submillimeter Spectrum of NaCCH ($X^1\Sigma$). B. Z. Li & L. M. Ziurys. 482, L215 (1997)
- LI, JING. What Is the Spatial Relationship between Hard X-Ray Footpoints and Vertical Electric Currents in Solar Flares? Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi. 482, 490 (1997)
- LIDMAN, C. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- LIEBERT, JAMES. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. J. L. Provençal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion. 480, 777 (1997)

- LILLY, S. J. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- LIN, Y. C. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- LIPMAN, E. A. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- LIU, XIANMING. The Emission Continuum of Electron-excited Molecular Hydrogen. *H. Abgrall, E. Roueff, Xianming Liu, & D. E. Shemansky.* 481, 557 (1997)
- LIVIO, M. On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov.* 481, 127 (1997)
- LO, K.-Y. First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)
- LOBANOV, A. P. Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller.* 480, 596 (1997)
- LOEWENSTEIN, M. Lack of Evolution in the Iron Abundance in Clusters of Galaxies and Implications for the Global Star Formation Rate at High Redshift. *R. F. Mushotzky & M. Loewenstein.* 481, L63 (1997)
- X-Ray Properties of Early-Type Galaxies as Observed with ASCA. *H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita.* 482, 133 (1997)
- LONG, DANIEL C. See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- LONG, KNOX S. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)
- LOPES, ILIDIO. Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ilidio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil.* 480, 794 (1997)
- LORIMER, D. R. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- LOVAS, FRANK J. Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas.* 480, L71 (1997)
- LOVELACE, R. V. E. Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. *M. M. Romanova, G. V. Usiyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace.* 482, 708 (1997)
- LOVELACE, RICHARD V. E. Kelvin-Helmholtz and Thermal-Dynamic Instabilities with Self-Gravity: A New Gravitational Interface Instability. *James H. Hunter, Jr., Rodney W. Whitaker, & Richard V. E. Lovelace.* 482, 852 (1997)
- LOWDER, D. M. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- LOWENTHAL, JAMES D. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field. *James D. Lowenthal, David C. Koo, Rafael Guzmán, Jesús Gallego, Andrew C. Phillips, S. M. Faber, Nicole P. Vogt, Garth D. Illingworth, & Caryl Gronwall.* 481, 673 (1997)
- LU, NANYAO Y. A Minnesota Automated Plate Scanner Catalog of Galaxies behind the Virgo Cluster and toward Its Antipode: Erratum. *G. Lyle Hoffman, John M. Dickey, Nanyao Y. Lu, & René Fromhold-Treu.* 480, 447 (1997) (Orig. paper in 473, 822, 331-E2 (1996))
- LUGGER, P. M. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)
- LUHMAN, K. L. Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer.* 480, L133 (1997)
- LUHMAN, M. L. Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer.* 480, L133 (1997)
- Near-Infrared H₂ and Associated O⁰ and C⁺ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch.* 482, 298 (1997)
- LYNE, A. G. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- LYON, R. G. Spatial Resolution of the R Aquarii Binary System. *J. M. Hovels, J. A. Pedetty, & R. G. Lyon.* 482, L85 (1997)
- MACDONALD, JAMES. Radiative Transfer Effects on the Stability of Sound Waves in a Polytropic Atmosphere. *James MacDonald & Dermott Mullan.* 481, 963 (1997)
- MACFARLANE, J. J. Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)
- MADDEN, S. C. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C⁺ and O⁰. *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)
- MADEJSKI, G. M. Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller.* 480, 596 (1997)
- MADORE, BARRY. See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- MADORE, BARRY F. Tip of the Red Giant Branch Distances to Galaxies. IV. Sextans B. *Shoko Sakai, Barry F. Madore, & Wendy L. Freedman.* 480, 589 (1997)
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- MAGDZIARZ, P. Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels.* 482, 173 (1997)
- MAGGIO, A. ROSAT PSPC Observation of the Northeast Region of the Vela Supernova Remnant. II. Spectral Analysis with a Nonequilibrium of Ionization Emission Model. *F. Bocchino, A. Maggio, & S. Sciortino.* 481, 872 (1997)
- MAGORRIAN, JOHN. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- MAHON, M. ELAINE. Chaos and Noise in Galactic Potentials. *Salman Habib, Henry E. Kandrup, & M. Elaine Mahon.* 480, 155 (1997)
- MAKIDA, Y. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- MAKINO, JUNICHIRO. GRAPE-4: A Massively Parallel Special-Purpose Computer for Collisional N-Body Simulations. *Junichiro Makino, Makoto Taiji, Toshikazu Ebisuzaki, & Daichiro Sugimoto.* 480, 432 (1997)
- Merger Rate of Equal-Mass Spherical Galaxies. *Junichiro Makino & Piet Hut.* 481, 83 (1997)
- MAKISHIMA, K. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- MALHERBE, J.-M. The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)
- MALHOTRA, SANGEETA. See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- MALKAN, M. A. Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
- MALLEN-ORNELAS, G. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- MALONEY, PHILIP R. Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. *Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach.* 482, L41 (1997)

- MANCHESTER, R. N. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- MARCHENKO, SERGEY V. Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. *Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko*. 482, 470 (1997)
- MARCY, GEOFFREY W. The Planet around 51 Pegasi. *Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan*. 481, 926 (1997)
- MARDIROSIAN, F. Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti*. 482, 41 (1997)
- MARGON, BRUCE. Time-Resolved Ultraviolet Observations of the Globular Cluster X-Ray Source in NGC 6624: The Shortest Known Period Binary System. *Scott F. Anderson, Bruce Margon, Eric W. Deutsch, Ronald A. Downes, & Richard G. Allen*. 482, L69 (1997)
- MARISKA, J. T. Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. *G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran*. 482, L109 (1997)
- MARKWARDT, CRAIG B. The ASCA Spectrum of the Vela Pulsar Jet. *Craig B. Markwardt & Hakki B. Ögelman*. 480, L13 (1997)
- MARSCHER, A. P. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Martí, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi*. 482, L33 (1997)
- MARSCHER, ALAN P. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- MARSHALL, S. L. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- MARTÍ, J. M^a. Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Martí, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi*. 482, L33 (1997)
- MARTIN, E. L. On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin*. 482, L77 (1997)
- MARTÍNEZ-DELGADO, DAVID. Luminous Red Stars in Local Group Dwarf Elliptical Galaxies: An Intermediate-Age Population? *David Martínez-Delgado & Antonio Aparicio*. 480, L107 (1997)
- MARTÍN-PINTADO, J. SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas*. 482, L45 (1997)
- MASTICHADIS, A. A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis*. 482, 874 (1997)
- MATEO, MARIO. Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan*. 481, 782 (1997)
- MATHEWS, G. J. Binary-induced Neutron Star Compression, Heating, and Collapse. *G. J. Mathews & J. R. Wilson*. 482, 929 (1997)
- MATSUMOTO, H. X-Ray Properties of Early-Type Galaxies as Observed with ASCA. *H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita*. 482, 133 (1997)
- See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- MATSUNAGA, H. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- MATSUSHITA, K. X-Ray Properties of Early-Type Galaxies as Observed with ASCA. *H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita*. 482, 133 (1997)
- MATTHEWS, J. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- MATTOX, J. R. The Identification of EGRET Sources with Flat-Spectrum Radio Sources. *J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik*. 481, 95 (1997)
- MATTOX, JOHN R. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- MATZNER, CHRISTOPHER D. Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. *Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky*. 482, 442 (1997)
- MAUSKOPF, P. D. See HOLZAPFEL, W. L., et al. Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163.
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange*. 481, 35 (1997)
- MAYER-HASSELWANDER, H. A. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- MAYYA, Y. D. Use of Red Supergiant Spectral Features as Age Indicators in Starburst Regions. *Y. D. Mayya*. 482, L149 (1997)
- MCCARTHY, D. W. The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck*. 481, 378 (1997)
- MCCARTHY, JAMES K. The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemec*. 482, 203 (1997)
- Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls*. 482, 757 (1997)
- MCCARTHY, M. C. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- MCCINTOCK, JEFFREY E. Advection-dominated Accretion Model of the Black Hole V404 Cygni in Quiescence. *Ramesh Narayan, Didier Barret, & Jeffrey E. McClintock*. 482, 448 (1997)
- MCCLYMONT, A. N. Shear Wave Dissipation in Planar Magnetic X-Points. *I. J. D. Craig & A. N. McClymont*. 481, 996 (1997)
- MCCLYMONT, ALEXANDER N. On the Subphotospheric Origin of Coronal Electric Currents. *Alexei A. Pevtsov, Richard C. Canfield, & Alexander N. McClymont*. 481, 973 (1997)
- MCENERY, J. E. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- MCGAUGH, STACY S. Gas Mass Fractions and the Evolution of Spiral Galaxies. *Stacy S. McGaugh & W. J. G. de Blok*. 481, 689 (1997)
- MCGLYNN, THOMAS A. A Gamma-Ray Flare in NRAO 190. *Thomas A. McGlynn, Robert C. Hartman, Steven D. Bloom, Margo Aller, Hugh Aller, Alexei V. Filippenko, Aaron J. Barth, W. K. Gear, Alan P. Marscher, John R. Mattox, W. Reich, E. I. Robson, Jochen Schramm, J. A. Stevens, H. Teräsanta, M. Tornikoski, W. Thomas Vestrand, Stefan Wagner, & Anke Heines*. 481, 625 (1997)
- MCHARDY, I. M. Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Tüarchuk, & C. von Montigny*. 482, 167 (1997)
- McKEE, S. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- MCLEAN, I. S. Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean*. 481, 186 (1997)
- MCLEOD, C. P. The Solar Core: New Low- l p -Mode Fine-Spacing Results from BISON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New*. 480, L75 (1997)
- MCMANARA, BRIAN R. ROSAT X-Ray Observations of the Cooling Flow Cluster A2597. *Craig L. Sarazin & Brian R. McNamara*. 480, 203 (1997)
- MCMANON-BROWN, K. Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels*. 482, 173 (1997)
- MCVEAN, J. R. Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan*. 481, 782 (1997)
- MCWILLIAM, ANDREW. The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. *John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris*. 480, 246 (1997)

- MEHRINGER, DAVID M. Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas*. 480, L71 (1997)
- Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss*. 482, 307 (1997)
- MEIXNER, M. Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens*. 482, 897 (1997)
- MELCHIORRI, ALESSANDRO. Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperis, Alessandro Melchiorri, & Nicola Vittorio*. 480, 1 (1997)
- MELROSE, D. B. Langmuir Wave Generation through a Neutrino Beam Instability. *S. J. Hardy & D. B. Melrose*. 480, 705 (1997)
- MENCI, N. Faint Blue Galaxies and Merging: The Evolution of the Luminosity Function. *A. Cavaliere & N. Menci*. 480, 132 (1997)
- MENDIS, D. A. Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. *K. R. Flammer, D. A. Mendis, & V. D. Shapiro*. 482, 1021 (1997)
- MENNELLA, V. Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussoletti, & G. Strazzulla*. 481, 545 (1997)
- MÉSZÁROS, P. Poynting Jets from Black Holes and Cosmological Gamma-Ray Bursts. *P. Mészáros & M. J. Rees*. 482, L29 (1997)
- Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. *A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros*. 482, 942 (1997)
- METCALF, THOMAS R. What Is the Spatial Relationship between Hard X-Ray Footpoints and Vertical Electric Currents in Solar Flares? *Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi*. 482, 490 (1997)
- MEURER, G. R. A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney*. 482, 114 (1997)
- MEWALDT, R. A. Effects of Solar Modulation on the Low-Energy Cosmic-Ray Antiproton/Proton Ratio. *A. W. Labrador & R. A. Mewaldt*. 480, 371 (1997)
- MEYER, DAVID M. Quasar Absorbing Galaxies at $z \leq 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach*. 480, 568 (1997)
- Carbon in the Diffuse Interstellar Medium. *Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer*. 482, L105 (1997)
- MEYER, S. S. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- MEYNET, GEORGES. Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet*. 481, L75 (1997)
- MEZZETTI, M. Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti*. 482, 41 (1997)
- MIAO, YANTI. Full Synthesis Observations of $\text{CH}_3\text{CH}_2\text{CN}$ in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder*. 480, L67 (1997)
- Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas*. 480, L71 (1997)
- MICHEL, ERIC. Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ildio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil*. 480, 794 (1997)
- MICHELSON, P. F. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- MIHOS, J. CHRISTOPHER. NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun*. 481, 741 (1997)
- MILLER, B. A. The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New*. 480, L75 (1997)
- MILLER, J. S. Scattered Nuclear Continuum and Broad $\text{H}\alpha$ in Cygnus A. *P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich*. 482, L37 (1997)
- MILLER, M. C. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- MILNE, DOUGLAS K. Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne*. 480, 618 (1997)
- MILONE, E. F. Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan*. 481, 782 (1997)
- MIN, K. W. Simulation of the Kelvin-Helmholtz Instability in the Magnetized Slab Jet. *K. W. Min*. 482, 733 (1997)
- MINESHIGE, SHIN. Self-similar Collapse of a Self-gravitating Viscous Disk. *Shin Mineshige & Masayuki Umemura*. 480, 167 (1997)
- MINNITI, D. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- MIRALLES, JUAN A. Convection in the Surface Layers of Neutron Stars. *Juan A. Miralles, V. Urpin, & K. Van Riper*. 480, 358 (1997)
- MIRANDA, OSWALDO D. Comparing Single-Cycle and Multicycle Explosive Scenarios for the Formation of Voids. *Oswaldo D. Miranda & Reuven Opher*. 482, 573 (1997)
- MITCHELL, J. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- MITCHELL, J. W. See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- MITSUDA, K. The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue*. 480, L115 (1997)
- MIYAMA, SHOKEN M. A Production Mechanism for Clusters of Dense Cores. *Shu-ichiro Inutsuka & Shoken M. Miyama*. 480, 681 (1997)
- MIYAZAKI, S. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- MIYOSHI, M. Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue*. 482, L113 (1997) (Orig. paper in 0, L0 (0))
- MOCHKOVITCH, ROBERT. The Fate of Merging White Dwarfs. *Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch*. 481, 355 (1997)
- MOHANTY, G. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- MOISEEV, A. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV. *A. Moiseev, K. Yoshimura, I. Ueda, K. Anraku, R. Golden, M. Imori, S. Inaba, B. Kimbell, N. Kimura, Y. Makida, H. Matsumoto, H. Matsunaga, J. Mitchell, M. Motoki, J. Nishimura, M. Nozaki, S. Orito, J. Ormes, T. Saeki, E. S. Seo, S. Stochaj, R. Streitmatter, J. Suzuki, K. Tanaka, N. Yajima, T. Yamagami, A. Yamamoto, & T. Yoshida*. 482, 1087 (1997) (Orig. paper in 474, 479 (1997))
- MOISEEV, A. A. See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- MOLENDI, SILVANO. On the Soft X-Ray Spectra of γ -loud Blazars. *Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi*. 480, 534 (1997)
- MOLNAR, L. The Identification of EGRET Sources with Flat-Spectrum Radio Sources. *J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik*. 481, 95 (1997)
- MONNIER, J. D. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin*. 481, 420 (1997)
- MONTES, MARCOS J. Radio Detection of SN 1986E in NGC 4302. *Marcos J. Montes, Schuyler D. Van Dyk, Kurt W. Weiler, Richard A. Sramek, & Nino Panagia*. 482, L61 (1997)
- MOORE, R. L. Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu*. 482, 519 (1997)

- MORAN, J. M. The Distribution of H₂O Maser Emission in the Nucleus of NGC 4945. *L. J. Greenhill, J. M. Moran, & J. R. Herrnstein*. 481, L23 (1997)
- Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue*. 482, L113 (1997) (Orig. paper in 0, L0 (0))
- MORAN, T. G. Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. *G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran*. 482, L109 (1997)
- MOREL, THIERRY. Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. *Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko*. 482, 470 (1997)
- MORGAN, E. H. RXTE Observations of QPOs in the Black Hole Candidate GRS 1915+105. *E. H. Morgan, R. A. Remillard, & J. Greiner*. 482, 993 (1997)
- MORINO, JUN-ICHI. Extensive High-Resolution ¹²CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-ichi Morino, & Kumiko Sato*. 481, 302 (1997)
- MORSE, JON. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hariigan, & Wilton T. Sanders*. 482, 881 (1997)
- MOTCH, C. ROSAT Detection and High-Precision Localization of X-Ray Sources in the 1978 November 19 Gamma-Ray Burst Error Box. *M. Böer, C. Motch, J. Greiner, W. Voges, P. Kahabka, & H. Pedersen*. 481, L39 (1997)
- MOTOKI, M. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- MOULD, JEREMY R. See KRIST, JOHN E., et al. Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri.
- The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould*. 482, 98 (1997)
- MOUSCHOVIAS, TELEMACHOS CH. Dynamical Effects of the Parker Instability in the Interstellar Medium. *Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou*. 480, L55 (1997)
- MÜCKET, J. P. The Power Spectrum of Microwave Background Temperature Anisotropies Measured by the Tenerife Experiment. *F. Atrio-Barandela, S. Götölöber, & J. P. Mückel*. 482, 1 (1997)
- MÜLLER, D. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- MUKHERJEE, R. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- MULCHAEY, JOHN S. The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. *John S. Mulchaey & Michael W. Regan*. 482, L135 (1997)
- MULLAN, DERMOTT. Radiative Transfer Effects on the Stability of Sound Waves in a Polytopic Atmosphere. *James MacDonald & Dermott Mullan*. 481, 963 (1997)
- MUNDY, LEE G. Millimeter and Radio Interferometry of Herbig Ae/Be Stars. *James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler*. 482, 433 (1997)
- MURAKAMI, T. Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata*. 481, 479 (1997)
- See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- MURPHY, B. W. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Ruten, & P. A. Charles*. 481, 267 (1997)
- MUSHOTZKY, R. F. Lack of Evolution in the Iron Abundance in Clusters of Galaxies and Implications for the Global Star Formation Rate at High Redshift. *R. F. Mushotzky & M. Loewenstein*. 481, L63 (1997)
- The Luminosity-Temperature Relation at $z = 0.4$ for Clusters of Galaxies. *R. F. Mushotzky & C. A. Scharf*. 482, L13 (1997)
- MUSHOTZKY, RICHARD F. Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky*. 482, 588 (1997)
- MUSSER, J. A. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- NAGAR, NEIL M. Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker*. 482, L195 (1997)
- NAGATA, TETSUYA. Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato*. 481, 936 (1997)
- NAJITA, J. X-Ray Ionization of Protoplanetary Disks. *A. E. Glassgold, J. Najita, & J. Igea*. 480, 344 (1997)
- NAKAI, N. Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue*. 482, L113 (1997) (Orig. paper in 0, L0 (0))
- NAKAMURA, FUMITAKA. Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. *Fumitaka Nakamura & Tomoyuki Hanawa*. 480, 701 (1997)
- NARAYAN, RAMESH. Advection-dominated Accretion Model of the Black Hole V404 Cygni in Quiescence. *Ramesh Narayan, Didier Barret, & Jeffrey E. McClintock*. 482, 448 (1997)
- NARLIKAR, J. V. Time Dilation in the Supernova Light Curve and the Variable Mass Hypothesis. *J. V. Narlikar & H. C. Arp*. 482, L119 (1997)
- NATH, BIMAN B. Lyman-Alpha Absorption Lines from Minipancakes. *Biman B. Nath*. 482, 621 (1997)
- NATHER, R. E. See PROVENÇAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- NEFF, JAMES E. Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. *K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff*. 481, 866 (1997)
- NEFF, SUSAN G. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- NELSON, AMY E. Distant Galaxy Clusters Identified from Optical Background Fluctuations. *Dennis Zaritsky, Amy E. Nelson, Julianne J. Dalcanton, & Anthony H. Gonzalez*. 480, L91 (1997)
- NELSON, RICHARD P. The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. *Richard P. Nelson & William D. Langer*. 482, 796 (1997)
- NELSON, ROBERT W. See CHAKRABARTY, DEEPTO, et al. On the Correlation of Torque and Luminosity in GX 1+4.
- NEMEC, JAMES M. The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemeć*. 482, 203 (1997)
- NETTERFIELD, C. BARTH. Galactic Microwave Emission at Degree Angular Scales. *Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack*. 482, L17 (1997)
- NEUMANN, D. M. Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. *G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods*. 482, 648 (1997)
- NEUSCHAEFER, L. W. Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFPC2 Data. *L. W. Neuschaefer, M. Im, K. U. Raimatunga, R. E. Griffiths, & S. Casertano*. 480, 59 (1997)
- NEW, R. The Solar Core: New Low- l -Mode Fine-Spacing Results from BISON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New*. 480, L75 (1997)
- NEWPORT, B. J. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- NICASTRO, L. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- NICHOL, R. C. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744–28.

- Evolution in the X-Ray Cluster Luminosity Function Revisited. *R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins.* 481, 644 (1997)
- NIKOLA, T. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)
- NISHIKAWA, AKINORI. Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuharu Kohyama, & Satoshi Nozawa.* 482, 33 (1997)
- NISHIMOTO, D. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- NISHIMURA, J. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- NITTA, NARIAKI. Imaging the Chromospheric Evaporation of the 1994 June 30 Solar Flare. *Adriana V. R. Silva, Haimin Wang, Dale E. Gary, Nariaki Nitta, & Harold Zirin.* 481, 978 (1997)
- NITZ, D. F. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- NOGUCHI, MASAFUMI. Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi.* 481, 132 (1997)
- NOLAN, P. L. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- NOLTHENIUS, RICHARD. Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . *Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack.* 480, 43 (1997)
- NOMACHI, M. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- NORMAN, COLIN A. Molecules at High Redshift: The Evolution of the Cool Phase of Protogalactic Disks. *Colin A. Norman & Marco Spaans.* 480, 145 (1997)
- NOZAKI, M. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- NOZAWA, SATOSHI. Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuharu Kohyama, & Satoshi Nozawa.* 482, 33 (1997)
- NUGENT, PETER. Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. *Adam Fisher, David Branch, Peter Nugent, & E. Baron.* 481, L89 (1997)
- NÚÑEZ, DARÍO. Oscillating Shells: A Model for a Variable Cosmic Object. *Dario Núñez.* 482, 963 (1997)
- NUTTER, S. L. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- NYMAN, L.-Å. Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. *Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-Å. Nyman.* 480, 607 (1997)
- O'BRIEN, PAUL T. Evidence for Nonlinear X-Ray Variability from the Broad-Line Radio Galaxy 3C 390.3. *Karen M. Leighly & Paul T. O'Brien.* 481, L15 (1997)
- O'CONNELL, ROBERT W. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- ODEGARD, N. A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall.* 480, 173 (1997)
- O'DONOGHUE, D. See PROVENÇAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- ÖGELMAN, HAKKI B. The ASCA Spectrum of the Vela Pulsar Jet. *Craig B. Markwardt & Hakki B. Ögelman.* 480, L13 (1997)
- OFFENBERG, JOEL D. See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- OGATA, SHUJI. Enhancement of Nuclear Reaction Rates in Dense Stellar Matter: A Path-Integral Monte Carlo Simulation Study. *Shuji Ogata.* 481, 883 (1997)
- OGLE, P. M. Scattered Nuclear Continuum and Broad $H\alpha$ in Cygnus A. *P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich.* 482, L37 (1997)
- OHASHI, T. See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- OHYAMA, YUICHI. A New Superwind Wolf-Rayet Galaxy Markarian 1259. *Yuichi Ohyama, Yoshiaki Taniguchi, & Roberto Terlevich.* 480, L9 (1997)
- OLSON, KEVIN. The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson.* 482, 22 (1997)
- ONG, R. A. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- OPHER, REUVEN. Comparing Single-Cycle and Multicycle Explosive Scenarios for the Formation of Voids. *Oswaldo D. Miranda & Reuven Opher.* 482, 573 (1997)
- ORITO, S. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- ORMES, J. F. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- ORMES, J. F. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance. *J. F. Ormes, A. A. Moiseev, T. Saeki, K. Anraku, S. Orito, R. L. Golden, M. Imori, S. Inaba, B. L. Kimbell, N. Kimura, Y. Makida, H. Matsumoto, H. Matsunaga, J. W. Mitchell, M. Motoki, J. Nishimura, M. Nozaki, R. E. Streitmatter, J. Suzuki, K. Tanaka, I. Ueda, N. Yajima, T. Yamagami, A. Yamamoto, T. Yoshida, & K. Yoshimura (BESS Collaboration).* 482, L187 (1997)
- OROSZ, JEROME A. Optical Observations of GRO J1655-40 in Quiescence. I. A Precise Mass for the Black Hole Primary: Erratum. *Jerome A. Orosz & Charles D. Bailyn.* 482, 1086 (1997) (Orig. paper in 477, 876 (1997))
- ORTOLANI, SERGIO. Capture of Field Stars by Globular Clusters in Dense Bulge Regions. *Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbuy.* 482, L49 (1997)
- ØSTGAARD, E. Energy Extraction from a Relativistic Accretion Disk by Reflection Effect. *P. Hadravský, G. Bao, & E. Østgaard.* 480, 324 (1997)
- OSTRIKER, EVE C. Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker.* 482, L195 (1997)
- OSTRIKER, JEREMIAH P. The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kulsrud, Rensyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu.* 480, 481 (1997)
- OUYED, RACHID. Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. *Rachid Ouyed & Ralph E. Pudritz.* 482, 712 (1997)
- OVERDUIN, J. M. Background Radiation Constraints on Supersymmetric Weakly Interacting Particles. *J. M. Overduin & P. S. Wesson.* 480, 470 (1997)
- OWEN, J. MICHAEL. Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen.* 481, 1 (1997)
- OZAKI, MASAO. Interactions of Convecting Magnetic Loops and Arcades. *Masao Ozaki, Tetsuya Sato, T. Hayashi, R. Horiuchi, K. Watanabe, Y. Todo, A. Kageyama, T. H. Watanabe, & H. Tamaru.* 481, 524 (1997)
- PADOAN, PAOLO. Are Low Surface Brightness Disks Young? *Paolo Padoan, Raul Jimenez, & Vincenzo Antonuccio-Delogu.* 481, L27 (1997)
- PAGE, L. A. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- PAGE, LYMAN A. Galactic Microwave Emission at Degree Angular Scales. *Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack.* 482, L17 (1997)

- PALEOLOGOU, EFTHIMIOS V. Dynamical Effects of the Parker Instability in the Interstellar Medium. *Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou*. 480, L55 (1997)
- PALUMBO, P. Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussoletti, & G. Strazzulla*. 481, 545 (1997)
- PANAGIA, NINO. Radio Detection of SN 1986E in NGC 4302. *Marcos J. Montes, Schuyler D. Van Dyk, Kurt W. Weiler, Richard A. Sramek, & Nino Panagia*. 482, L61 (1997)
- PANAITESCU, A. Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. *A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros*. 482, 942 (1997)
- PATIENCE, J. L. The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck*. 481, 378 (1997)
- PATNAIK, A. R. The Identification of EGRET Sources with Flat-Spectrum Radio Sources. *J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik*. 481, 95 (1997)
- PEARSON, J. C. Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia*. 480, 420 (1997)
- PEDELT, J. A. Spatial Resolution of the R Aquarii Binary System. *J. M. Hollis, J. A. Pedelt, & R. G. Lyon*. 482, L85 (1997)
- PEDERSEN, H. ROSAT Detection and High-Precision Localization of X-Ray Sources in the 1978 November 19 Gamma-Ray Burst Error Box. *M. Böer, C. Motch, J. Greiner, W. Voges, P. Kahabka, & H. Pedersen*. 481, L39 (1997)
- PEDRAZ, SANTOS. Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. *Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González*. 481, L19 (1997)
- PENG, R. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- PENNY, LAURA R. Two-dimensional Ultraviolet Spectral Typing of O-Type Stars: Erratum. *Laura R. Penny, Douglas R. Gies, & William G. Bagnuolo, Jr.* 482, 1085 (1997) (Orig. paper in 460, 906, 84-E13 (1996))
- PEREIRA, MARILDO G. Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding*. 482, L171 (1997)
- PETERSON, B. A. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- PETERSON, RUTH C. Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver*. 480, L47 (1997)
- PETRE, ROBERT. Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne*. 480, 618 (1997)
- PETROSIAN, VAHÉ. Stochastic Acceleration of Low-Energy Electrons in Cold Plasmas. *Julia M. Pryadko & Vahé Petrosian*. 482, 774 (1997)
- PEVTSOV, ALEXEI A. On the Subphotospheric Origin of Coronal Electric Currents. *Alexei A. Pevtsov, Richard C. Canfield, & Alexander N. McClymont*. 481, 973 (1997)
- PHILLIPS, ANDREW C. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- PHINNEY, E. STERL. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- PILDIS, RACHEL A. Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder*. 481, 157 (1997)
- PINSONNEAULT, M. H. Theoretical Models of the Angular Momentum Evolution of Solar-Type Stars. *Anita Krishnamurthi, M. H. Pinsonneault, S. Barnes, & S. Sofia*. 480, 303 (1997)
- Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn*. 480, 784 (1997)
- PIOTTO, GIAMPAOLO. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- PIPHER, JUDITH L. S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest*. 481, 327 (1997)
- PIRZKAL, N. A Search for Close Bright Companions to AeBe Stars. *N. Pirzkal, E. J. Spillar, & H. M. Dyck*. 481, 392 (1997)
- PLANESAS, P. SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas*. 482, L45 (1997)
- PLETT, K. Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata*. 481, 467 (1997)
- POGLITSCH, A. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey*. 481, 343 (1997)
- Near-Infrared H_2 and Associated O^0 and C^+ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch*. 482, 298 (1997)
- POLAND, A. I. Effects of Non-LTE Radiative Loss and Partial Ionization on the Structure of the Transition Region. *J. Chae, H. S. Yun, & A. I. Poland*. 480, 817 (1997)
- PORTER, J. G. Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu*. 482, 519 (1997)
- PORTO DE MELLO, G. F. HR 6060: The Closest Ever Solar Twin? *G. F. Porto de Mello & L. da Silva*. 482, L89 (1997)
- POUND, MARC W. Kinematics of the Ursa Major Molecular Clouds. *Marc W. Pound & Alyssa A. Goodman*. 482, 334 (1997)
- PRADHAN, A. K. The Accreting White Dwarf in the Close Binary EUVE J1016-053. *S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan*. 482, L73 (1997)
- PRATT, M. R. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- PRIMACK, JOEL R. Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . *Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack*. 480, 43 (1997)
- PRIMAS, F. Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn*. 480, 784 (1997)
- PRINCE, T. A. Observations of Two Millisecond Pulsars in the Globular Cluster NGC 5904. *S. B. Anderson, A. Wolszczan, S. R. Kulkarni, & T. A. Prince*. 482, 870 (1997)
- PRINCE, THOMAS A. See CHAKRABARTY, DEEPTO, et al. On the Correlation of Torque and Luminosity in GX 1+4.
- PROVENCAL, J. L. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis). *J. L. Provencal, D. E. Winget, R. E. Nather, E. L. Robinson, J. C. Clemens, P. A. Bradley, C. F. Claver, S. J. Kleinman, A. D. Grauer, B. P. Hine, L. Ferrario, D. O'Donoghue, B. Warner, G. Vauclair, M. Chevreton, S. O. Kepler, M. A. Wood, & G. W. Henry*. 480, 383 (1997)
- Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. *J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion*. 480, 777 (1997)
- PRYADKO, JULIA M. Stochastic Acceleration of Low-Energy Electrons in Cold Plasmas. *Julia M. Pryadko & Vahé Petrosian*. 482, 774 (1997)
- PUCHALLA, J. L. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- PUDRITZ, RALPH E. Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. *Rachid Ouyed & Ralph E. Pudritz*. 482, 712 (1997)
- PULS, JOACHIM. Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls*. 482, 757 (1997)
- PURCELL, W. R. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- PUYOO, O. The Neutral Hydrogen Abundance and Ionization in the Inner Heliosphere. *O. Puyoo, L. Ben Jaffel, & C. Emerich*. 480, 262 (1997)

- QIAN, Y.-Z. Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian*. 482, 951 (1997)
- QUASHNOCK, J. M. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- QUILLEN, A. C. Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy*. 481, 179 (1997)
- QUINN, J. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- QUINN, P. J. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- RABELLO SOARES, M. C. Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich*. 480, 840 (1997)
- RADFORD, S. J. E. Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford*. 481, L35 (1997)
- RAMOS, E. Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny*. 482, 167 (1997)
- RATHBUN, PAMELA. Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. *William P. Abbott, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein*. 480, 395 (1997)
- RATNATUNGA, K. U. Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFPC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ratnatunga, R. E. Griffiths, & S. Casertano*. 480, 59 (1997)
- RATRA, BHARAT. Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmologies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Banday, & Krzysztof M. Górski*. 481, 22 (1997)
- RAUCH, MICHAEL. QSO Metal Absorption Systems at High Redshift and the Signature of Hierarchical Galaxy Formation. *Michael Rauch, Martin G. Haehnelt, & Matthias Steinmetz*. 481, 601 (1997)
- RAYMOND, JOHN. First Hubble Space Telescope Observations of Mira AB Wind-accreting Binary Systems. *Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan*. 482, L175 (1997)
- RAYMOND, JOHN C. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders*. 482, 881 (1997)
- REBOLO, R. New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. *C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones*. 480, L83 (1997)
- REES, M. J. Poynting Jets from Black Holes and Cosmological Gamma-Ray Bursts. *P. Mészáros & M. J. Rees*. 482, L29 (1997)
- REGAN, MICHAEL W. The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. *John S. Mulchaey & Michael W. Regan*. 482, L135 (1997)
- The Mass Inflow Rate in the Barred Galaxy NGC 1530. *Michael W. Regan, Stuart N. Vogel, & Peter J. Teuben*. 482, L143 (1997)
- REICH, W. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- REMILLARD, R. A. *RXTE* Observations of QPOs in the Black Hole Candidate GRS 1915+105. *E. H. Morgan, R. A. Remillard, & J. Greiner*. 482, 993 (1997)
- RENZINI, ALVIO. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- REPHAELI, Y. See HOLZAPFEL, W. L., et al. Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163.
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mausekopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange*. 481, 35 (1997)
- REPHAELI, YOEL. Relativistic Corrections in the Determination of H_0 from X-Ray and Sunyaev-Zeldovich Measurements. *Yoel Rephaeli & Doron Yankovitch*. 481, L55 (1997)
- RHOADS, JAMES E. See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- RICH, R. MICHAEL. See SOSIN, CRAIG, et al. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808.
- RICHSTONE, DOUGLAS. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- RIEKE, G. H. Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Almudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz*. 482, 747 (1997)
- RIEKE, M. J. Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Almudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz*. 482, 747 (1997)
- RITTER, H. Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter*. 482, 919 (1997)
- ROBBA, N. R. Harmonic Coupling of the Red Noise in X-Ray Pulsars. *L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi*. 481, 943 (1997)
- ROBERTS, MORTON S. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- ROBINSON, E. L. See PROVENCAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- ROBSON, E. I. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- ROCA CORTÉS, T. Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich*. 480, 840 (1997)
- RODGERS, A. J. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- RODGERS, A. W. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- RODGERS, S. D. Deuterated Methanol in the Orion Compact Ridge. *S. B. Charnley, A. G. G. M. Tielens, & S. D. Rodgers*. 482, L203 (1997)
- RODRIGUES DE OLIVEIRA FILHO, IRAPUAN. Capture of Field Stars by Globular Clusters in Dense Bulge Regions. *Eduardo Bica, Horacio Dotoli, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbay*. 482, L49 (1997)
- RODRÍGUEZ, LUIS F. Is SVS 13 the Exciting Source of the HH 7-11 Flow? *Luis F. Rodríguez, Guillem Anglada, & Salvador Curiel*. 480, L125 (1997)
- ROETTIGER, KURT. Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky*. 482, 588 (1997)
- ROLA, C. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- ROLLESTON, WILLIAM ROBERT J. The Galactic Oxygen Abundance Gradient. *Stephen J. Smart & William Robert J. Rolleston*. 481, L47 (1997)
- ROMANOVA, M. M. Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. *M. M. Romanova, G. V. Ustyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace*. 482, 708 (1997)
- ROMER, A. K. Evolution in the X-Ray Cluster Luminosity Function Revisited. *R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins*. 481, 644 (1997)
- ROOD, ROBERT T. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.

- ROSE, H. J. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- ROSENBERG, L. J. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- ROTUNDI, A. Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennello, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussoletti, & G. Strazzulla.* 481, 545 (1997)
- ROUEFF, E. The Emission Continuum of Electron-excited Molecular Hydrogen. *H. Abgrall, E. Roueff, Xianming Liu, & D. E. Shemansky.* 481, 557 (1997)
- ROY, JEAN-RENÉ. The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)
- RUFFOLO, D. Charge States of Solar Cosmic Rays and Constraints on Acceleration Times and Coronal Transport. *D. Ruffolo.* 481, L119 (1997)
- RUHL, J. E. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- RUIZ, M. Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Almudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)
- RUIZ-LAPUENTE, P. Dormant Dwarf Spheroidal Galaxies, Deactivated by Type Ia Supernovae. *A. Burkert & P. Ruiz-Lapuente.* 480, 297 (1997)
- RUTLEDGE, ROBERT E. Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. *Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou.* 482, L53 (1997)
- RUTTEN, R. G. M. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)
- RYAN, SEAN G. Keck Observation of Lithium in a Cool Halo Dwarf Common Proper-Motion Pair. *Constantine P. Deliyannis & Sean G. Ryan.* 480, L43 (1997)
- RYU, DONGSU. The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kulsrud, Renyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu.* 480, 481 (1997)
- The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank.* 482, 230 (1997)
- SAAR, STEVEN H. The Emergence of Magnetic Flux Loops in Sunlike Stars. *Edward E. DeLuca, Yuhong Fan, & Steven H. Saar.* 481, 369 (1997)
- SAEKI, T. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- SAKAI, SHOKO. Tip of the Red Giant Branch Distances to Galaxies. IV. Sextans B. *Shoko Sakai, Barry F. Madore, & Wendy L. Freedman.* 480, 589 (1997)
- SAKAMOTO, SEIICHI. Extensive High-Resolution ^{12}CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato.* 481, 302 (1997)
- SALZER, JOHN. Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner.* 482, L121 (1997)
- SAMUELSON, F. W. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- SANDERS, R. H. A Stratified Framework for Scalar-Tensor Theories of Modified Dynamics. *R. H. Sanders.* 480, 492 (1997)
- SANDERS, WILTON T. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)
- SARAZIN, C. L. Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin.* 481, 838 (1997)
- SARAZIN, CRAIG L. ROSAT X-Ray Observations of the Cooling Flow Cluster A2597. *Craig L. Sarazin & Brian R. McNamara.* 480, 203 (1997)
- SASSEEN, TIMOTHY P. Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen.* 481, 809 (1997)
- SASTRY, K. V. L. N. Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia.* 480, 420 (1997)
- SATO, KUMIKO. Extensive High-Resolution ^{12}CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato.* 481, 302 (1997)
- SATO, SHUJI. Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato.* 481, 936 (1997)
- SATO, TETSUYA. See OZAKI, MASAO, et al. Interactions of Convecting Magnetic Loops and Arcades.
- SAVAGE, BLAIR D. High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp.* 480, 216 (1997)
- SCHAAB, CHRISTOPH. Differences in the Cooling Behavior of Strange Quark Matter Stars and Neutron Stars. *Christoph Schaab, Bernd Herrmann, Fridolin Weber, & Manfred K. Weigel.* 480, L111 (1997)
- SCHACHTER, J. The Identification of EGRET Sources with Flat-Spectrum Radio Sources. *J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik.* 481, 95 (1997)
- SCHADE, D. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- SCHAEERER, DANIEL. Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaeerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)
- SCHARF, C. A. The Luminosity-Temperature Relation at $z = 0.4$ for Clusters of Galaxies. *R. F. Mushotzky & C. A. Scharf.* 482, L13 (1997)
- SCHARRINGHAUSEN, B. R. A Radio Survey for Pulsar Wind Nebulae. *D. A. Frail & B. R. Scharringhausen.* 480, 364 (1997)
- SCHLOERB, F. PETER. Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell.* 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb.* 482, 267 (1997)
- SCHMALZING, JENS. Beyond Genus Statistics: A Unifying Approach to the Morphology of Cosmic Structure. *Jens Schmalzing & Thomas Buchert.* 482, L1 (1997)
- SCHMIEDER, B. The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tübel, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)
- SCHNEID, E. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- SCHNEIDER, E. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- SCHOMBERT, JAMES M. Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
- SCHOU, J. Detection of Zonal Shear Flows beneath the Sun's Surface from f-Mode Frequency Splitting. *A. G. Kosovichev & J. Schou.* 482, L207 (1997)
- SCHRAMM, DAVID N. Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. *Russell W. Strickland & David N. Schramm.* 481, 571 (1997)
- SCHRAMM, JOCHEN. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- SCHRIJVER, CAROLUS J. Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver.* 480, L47 (1997)
- The Distribution of Cell Sizes of the Solar Chromospheric Network. *Hermance J. Hagenaar, Carolus J. Schrijver, & Alan M. Title.* 481, 988 (1997)

- SCHUBNELL, M. S. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- SCHÜHLE, U. Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. *G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran.* 482, L109 (1997)
- SCIORTINO, S. ROSAT PSPC Observation of the Northeast Region of the Vela Supernova Remnant. II. Spectral Analysis with a Nonequilibrium of Ionization Emission Model. *F. Bocchino, A. Maggio, & S. Sciortino.* 481, 872 (1997)
- SCOWEN, PAUL A. See KRIST, JOHN E., et al. Hubble Space Telescope WFC2 Images of Emission Nebulosity near XZ Tauri.
- SEAHRA, S. Luminescence from Hydrogenated Amorphous Carbon and Extended Red Emission from Nebulae. *W. W. Duley, S. Seahra, & D. A. Williams.* 482, 866 (1997)
- SEGAL, I. E. Cosmic Time Dilation. *I. E. Segal.* 482, L115 (1997)
- SEGRETAIN, LAURENT. The Fate of Merging White Dwarfs. *Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch.* 481, 355 (1997)
- SEITZER, P. O. The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)
- SEKIMOTO, Y. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- SELJAK, U. Shear and Ellipticity in Gravitational Lenses. *C. R. Keeton, C. S. Kochanek, & U. Seljak.* 482, 604 (1997)
- SELJAK, UROŠ. Measuring Polarization in the Cosmic Microwave Background. *Uroš Seljak.* 482, 6 (1997)
- SEMBACH, KENNETH R. High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp.* 480, 216 (1997)
- Quasar Absorbing Galaxies at $z \leq 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach.* 480, 568 (1997)
- SEMBROSKI, G. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- SEMBROSKI, G. H. See KRENNRICH, F., et al. Detection of Multi-TeV Emission from Markarian 421.
- SEO, E. S. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- SEVERSON, S. A. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744-28.
- SHAH, RONAK Y. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- SHAPIRO, V. D. Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. *K. R. Flammer, D. A. Mendis, & V. D. Shapiro.* 482, 1021 (1997)
- SHARPLES, R. M. A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)
- SHEMANSKY, D. E. The Emission Continuum of Electron-excited Molecular Hydrogen. *H. Abgrall, E. Roueff, Xianming Liu, & D. E. Shemansky.* 481, 557 (1997)
- SHEPHERD, D. S. A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner.* 482, 355 (1997)
- SHIELDS, G. A. High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields.* 481, 174 (1997)
- SHIELDS, JOSEPH C. On the Nature of Ultraviolet and X-Ray Absorption in NGC 3783. *Joseph C. Shields & Fred Hamann.* 481, 752 (1997)
- SHIMIZU, T. Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu.* 482, 519 (1997)
- SHINE, R. A. The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)
- SHIPMAN, H. L. Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. *J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion.* 480, 777 (1997)
- SHUPING, R. YOUNG. Abundances and Depletions toward the Orion Nebula. *R. Young Shuping & Theodore P. Snow.* 480, 272 (1997)
- SIEBENMORGEN, RALF. Spectral Analysis Using the Wavelet Transform. *Jean-Luc Starck, Ralf Siebenmorgen, & Roland Gredel.* 482, 1011 (1997)
- SIEMIGINOWSKA, ANETA. Deriving the Quasar Luminosity Function from Accretion Disk Instabilities. *Aneta Siemiginowska & Martin Elvis.* 482, L9 (1997)
- SILK, JOSEPH. Feedback, Disk Self-Regulation, and Galaxy Formation. *Joseph Silk.* 481, 703 (1997)
- SILVA, ADRIANA V. R. Imaging the Chromospheric Evaporation of the 1994 June 30 Solar Flare. *Adriana V. R. Silva, Haimin Wang, Dale E. Gary, Nariaki Nitta, & Harold Zirin.* 481, 978 (1997)
- SILVERBERG, R. F. See KOWITT, M. S., et al. A Detection of Bright Features in the Microwave Background.
- SIMON, M. Clustering of Young Stars in Taurus, Ophiuchus, and the Orion Trapezium. *M. Simon.* 482, L81 (1997)
- SINCLAIR, D. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- SINGH, S. Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. *J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh.* 481, 954 (1997)
- SION, E. M. Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. *J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion.* 480, 777 (1997)
- SION, EDWARD M. Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny.* 480, L17 (1997)
- SKIBO, J. G. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- SKILLMAN, E. D. High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields.* 481, 174 (1997)
- SKINNER, C. J. Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens.* 482, 897 (1997)
- SMALE, ALAN P. Discovery of a New Soft X-Ray Excess in the Spectrum of EXO 0748-676. *Brian Thomas, Robin Corbet, Alan P. Smale, Kazumi Asai, & Tadayasu Dotani.* 480, L21 (1997)
- SMARTT, STEPHEN J. The Galactic Oxygen Abundance Gradient. *Stephen J. Smartt & William Robert J. Rolleston.* 481, L47 (1997)
- SMITH, ANDREW M. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- SMITH, D. M. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- SMITH, DENISE A. See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- SMITH, MYRON A. Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)
- Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata.* 481, 479 (1997)
- SMITH, R. CHRIS. Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)

- SMOOT, GEORGE F. Contribution of Extragalactic Infrared Sources to Cosmic Microwave Background Foreground Anisotropy. *Eric Gawiser & George F. Smoot*. 480, L1 (1997)
- SNEDEN, CHRISTOPHER. The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. *John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris*. 480, 246 (1997)
- SNELL, RON L. Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell*. 482, 245 (1997)
- SNELL, RONALD L. A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb*. 482, 267 (1997)
- The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. *Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer*. 482, 285 (1997)
- SNOW, THEODORE P. Abundances and Depletions toward the Orion Nebula. *R. Young Shuping & Theodore P. Snow*. 480, 272 (1997)
- SNYDER, LEWIS E. Full Synthesis Observations of CH₃CH₂CN in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder*. 480, L67 (1997)
- Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas*. 480, L71 (1997)
- SOBOTKA, M. Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. *J. Hirzberger, M. Vázquez, J. A. Bonet, A. Hansmeier, & M. Sobotka*. 480, 406 (1997)
- SODROSKI, T. J. A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall*. 480, 173 (1997)
- SOFIA, S. Theoretical Models of the Angular Momentum Evolution of Solar-Type Stars. *Anita Krishnamurthi, M. H. Pinsonneault, S. Barnes, & S. Sofia*. 480, 303 (1997)
- SOFIA, ULYSSES J. Carbon in the Diffuse Interstellar Medium. *Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer*. 482, L105 (1997)
- SOLOMON, P. M. Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford*. 481, L35 (1997)
- SOMMER-LARSEN, J. A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. *J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen*. 481, 775 (1997)
- SONGAILA, ANTOINETTE. The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami*. 481, L9 (1997)
- SORNBORGER, ANDREW. The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson*. 482, 22 (1997)
- SOSIN, CRAIG. Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808. *Craig Sosin, Ben Dorman, S. George Djorgovski, Giampaolo Piotto, R. Michael Rich, Ivan R. King, James Liebert, E. Sterl Phinney, & Alvio Renzini*. 480, L35 (1997)
- SPAANS, MARCO. Molecules at High Redshift: The Evolution of the Cool Phase of Protogalactic Disks. *Colin A. Norman & Marco Spaans*. 480, 145 (1997)
- Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. *Marco Spaans & C. Marcello Carollo*. 482, L93 (1997)
- SPARKS, WARREN M. Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny*. 480, L17 (1997)
- SPERGEL, DAVID N. The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers*. 482, 659 (1997)
- SPILLAR, E. J. A Search for Close Bright Companions to AeBe Stars. *N. Pirzkal, E. J. Spillar, & H. M. Dyck*. 481, 392 (1997)
- SPRAYBERRY, D. Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun*. 482, 104 (1997)
- SQUIRES, G. Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. *G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods*. 482, 648 (1997)
- SRAMEK, RICHARD A. Radio Detection of SN 1986E in NGC 4302. *Marcos J. Montes, Schuyler D. Van Dyk, Kurt W. Weiler, Richard A. Sramek, & Nino Panagia*. 482, L61 (1997)
- SREEKUMAR, P. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- STACEY, G. J. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C⁺ and O⁰. *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey*. 481, 343 (1997)
- STAPELFELDT, KARL R. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.
- STAPPERS, B. W. See BAILES, M., et al. Discovery of Four Isolated Millisecond Pulsars.
- STARCK, JEAN-LUC. Spectral Analysis Using the Wavelet Transform. *Jean-Luc Starck, Ralf Siebenmorgen, & Roland Gredel*. 482, 1011 (1997)
- STARK, ANTONY A. First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolato, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo*. 480, L59 (1997)
- Potential Measurement of the Luminosity Function of 158 Micron [C II] at High Redshifts: A Test of Galaxy Formation Models. *Antony A. Stark*. 481, 587 (1997)
- STAUFFER, JOHN R. Deep ROSAT HRI Observations of the Orion Nebula Region: Erratum. *Marc Gagné, Jean-Pierre Caillaud, & John R. Stauffer*. 482, 569 (1997) (Orig. paper in 445, 280, 136-D2 (1995))
- STECHER, T. P. S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. *W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher*. 481, L93 (1997)
- STECHER, THEODORE P. See DORMAN, BEN, et al. UIT Detection of Hot Stars in the Globular Cluster NGC 362.
- See WALLER, WILLIAM H., et al. Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101.
- See FANELLI, MICHAEL N., et al. An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk.
- ŠTEFL, S. See KAMBE, E., et al. Multiperiodicity of ζ Ophiuchi from Multisite Observations.
- STEIDEL, CHARLES C. Quasar Absorbing Galaxies at $z \leq 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach*. 480, 568 (1997)
- STEIN, ROBERT F. Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. *William P. Abbott, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein*. 480, 395 (1997)
- Formation of Solar Calcium H and K Bright Grains. *Mats Carlsson & Robert F. Stein*. 481, 500 (1997)
- STEINMETZ, MATTHIAS. QSO Metal Absorption Systems at High Redshift and the Signature of Hierarchical Galaxy Formation. *Michael Rauch, Martin G. Haehnelt, & Matthias Steinmetz*. 481, 601 (1997)
- STERN, C. X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx*. 482, 143 (1997)
- STERNBERG, A. Near-Infrared H₂ and Associated O⁰ and C⁺ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch*. 482, 298 (1997)
- STEVENS, J. A. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- ST-LOUIS, NICOLE. Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. *Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko*. 482, 470 (1997)
- STOCHAJ, S. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.

- STOCKE, JOHN T. The Canada-France-Hawaii Telescope Imaging Survey of BL Lacertae Objects. II. Clustering Environments. *Ron Wurtz, John T. Stocke, E. Ellingson, & H. K. C. Yee.* 480, 547 (1997)
- STOCKTON, ALAN. Spectroscopy of Close Companions to Quasi-stellar Objects and the Ages of Interaction-induced Starbursts. *Gabriela Canalizo & Alan Stockton.* 480, L5 (1997)
- STONE, JAMES M. Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky.* 482, 588 (1997)
- Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker.* 482, L195 (1997)
- STORCHI-BERGMANN, T. The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. *A. S. Wilson, L. Binette, & T. Storchi-Bergmann.* 482, L131 (1997)
- STRAZZULLA, G. Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussoletti, & G. Strazzulla.* 481, 545 (1997)
- STREITMATTER, R. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- STREITMATTER, R. E. See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- STRICKLAND, RUSSELL W. Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. *Russell W. Strickland & David N. Schramm.* 481, 571 (1997)
- STROHMAYER, T. E. Neutron Star Masses and Radii as Inferred from Kilohertz Quasi-periodic Oscillations. *W. Zhang, T. E. Strohmayer, & J. H. Swank.* 482, L167 (1997)
- STROM, STEPHEN E. Near-Infrared Emission of Protostars. *Nuria Calvet, Lee Hartmann, & Stephen E. Strom.* 481, 912 (1997)
- STURROCK, P. A. Coronal Heating and the Vertical Temperature Structure of the Quiet Corona. *M. S. Wheatland, P. A. Sturrock, & L. W. Acton.* 482, 510 (1997)
- SUGAI, H. Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
- SUGIMOTO, DAIICHIRO. GRAPE-4: A Massively Parallel Special-Purpose Computer for Collisional N-Body Simulations. *Junichiro Makino, Makoto Taiji, Toshikazu Ebisuzaki, & Daiichiro Sugimoto.* 480, 432 (1997)
- SUGIYAMA, NAOSHI. Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmologies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Banday, & Krzysztof M. Górski.* 481, 22 (1997)
- SULENTIC, JACK W. The Twin Paradoxes of Compact Groups: Discordant Excess Muted but the Dynamical Puzzle Persists. *Jack W. Sulentic.* 482, 640 (1997)
- SUMMERS, F. J. The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers.* 482, 659 (1997)
- SUTHERLAND, W. See ALCOCK, C., et al. The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars.
- SUZUKI, J. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- SWANK, J. H. Neutron Star Masses and Radii as Inferred from Kilohertz Quasi-periodic Oscillations. *W. Zhang, T. E. Strohmayer, & J. H. Swank.* 482, L167 (1997)
- SWORDY, S. P. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- SZALAY, ALEXANDER S. Cumulant Correlators from the APM. *István Szapudi & Alexander S. Szalay.* 481, L1 (1997)
- Toward More Precise Photometric Redshifts: Calibration via CCD Photometry. *Robert J. Brunner, Andrew J. Connolly, Alexander S. Szalay, & Matthew A. Bershad.* 482, L21 (1997)
- SZAPUDI, ISTVÁN. Cumulant Correlators from the APM. *István Szapudi & Alexander S. Szalay.* 481, L1 (1997)
- SZKODY, PAULA. Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny.* 480, L17 (1997)
- Observations of the SW Sextantis Star BH Lyncis in a High State. *D. W. Hoard & Paula Szkody.* 481, 433 (1997)
- TAIJI, MAKOTO. GRAPE-4: A Massively Parallel Special-Purpose Computer for Collisional N-Body Simulations. *Junichiro Makino, Makoto Taiji, Toshikazu Ebisuzaki, & Daiichiro Sugimoto.* 480, 432 (1997)
- TAKAHARA, F. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- TAKAHASHI, T. The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue.* 480, L115 (1997)
- See IKEBE, Y., et al. Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies.
- See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- TAKAMI, HIDEKI. Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato.* 481, 936 (1997)
- TAKEUCHI, TAKU. Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato.* 481, 936 (1997)
- TAMURA, MOTOHIDE. Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato.* 481, 936 (1997)
- TAMURA, T. See YAMASAKI, N. Y., et al. Hard X-Ray Emission from the Galactic Ridge.
- TANAKA, K. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- TANIGUCHI, YOSHIAKI. A New Superwind Wolf-Rayet Galaxy Markarian 1259. *Yoshiaki Taniguchi, Roberto Terlevich, & Roberto Terlevich.* 480, L9 (1997)
- TANVIR, NIAL R. Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 75 (1997)
- TARAMARU, H. See OZAKI, MASAO, et al. Interactions of Convecting Magnetic Loops and Arcades.
- TARASOV, A. E. See KAMBE, E., et al. Multiperiodicity of ζ Ophiuchi from Multisite Observations.
- TARBELL, T. The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)
- TARLE, G. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- TASSOUL, JEAN-LOUIS. On Synchronization in Detached Close Binaries: Reply to Rieutord and Zahn. *Monique Tassoul & Jean-Louis Tassoul.* 481, 363 (1997)
- TASSOUL, MONIQUE. On Synchronization in Detached Close Binaries: Reply to Rieutord and Zahn. *Monique Tassoul & Jean-Louis Tassoul.* 481, 363 (1997)
- TAVANI, M. X-Ray Emission of Gamma-Ray Bursts. *M. Tavani.* 480, 351 (1997)
- TAYAL, S. S. Effective Collision Strengths for Electron Impact Excitation of Inelastic Transitions in S III. *S. S. Tayal.* 481, 550 (1997)
- TAYLOR, A. N. Quasar Variability and Gravitational Microlensing. *M. R. S. Hawkins & A. N. Taylor.* 482, L5 (1997)
- TAYLOR, ANDY N. Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? *Max Tegmark, Andy N. Taylor, & Alan F. Heavens.* 480, 22 (1997)
- TAYLOR, CHRISTOPHER L. The H I Companions of H II Galaxies and Low Surface Brightness Dwarf Galaxies. *Christopher L. Taylor.* 480, 524 (1997)
- TEGMARK, MAX. Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? *Max Tegmark, Andy N. Taylor, & Alan F. Heavens.* 480, 22 (1997)
- How to Make Maps from Cosmic Microwave Background Data without Losing Information. *Max Tegmark.* 480, L87 (1997)
- TERÄSRANTA, H. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.

- See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- TERLEVICH, ROBERTO. A New Superwind Wolf-Rayet Galaxy Markarian 1259. *Yoshiaki Ohya, Yoshiaki Taniguchi, & Roberto Terlevich*. 480, L9 (1997)
- TEUBEN, PETER J. The Mass Inflow Rate in the Barred Galaxy NGC 1530. *Michael W. Regan, Stuart N. Vogel, & Peter J. Teuben*. 482, L143 (1997)
- TEYSSIER, ROMAIN. Self-similar Spherical Collapse Revisited: A Comparison between Gas and Dark Matter Dynamics. *Romain Teyssier, Jean-Pierre Chieze, & Jean-Michel Alimi*. 480, 36 (1997)
- THADDEUS, P. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- THAYER, M. R. An Investigation into Sulfur Isotopes in the Galactic Cosmic Rays. *M. R. Thayer*. 482, 792 (1997)
- THEILL, PETER A. Hot White Dwarfs in the *Extreme Ultraviolet Explorer* Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Theill, Ricardo Génova Galván, & Jean Dupuis*. 480, 714 (1997)
- THOMAS, BRIAN. Discovery of a New Soft X-Ray Excess in the Spectrum of EXO 0748-676. *Brian Thomas, Robin Corbet, Alan P. Smale, Kazumi Asai, & Tadayasu Dotani*. 480, L21 (1997)
- THOMAS, R. J. Relative Elemental Abundances of the Quiet Solar Corona as Determined by SERTS. *D. A. Falconer, J. M. Davila, & R. J. Thomas*. 482, 1050 (1997)
- THOMPSON, D. J. See CATANESE, M., et al. Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae.
- See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- THORBURN, J. A. *Hubble Space Telescope* Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn*. 480, 784 (1997)
- TIELENS, A. G. G. M. The Physics of Dust Coagulation and the Structure of Dust Aggregates in Space. *C. Dominik & A. G. G. M. Tielens*. 480, 647 (1997)
- Deuterated Methanol in the Orion Compact Ridge. *S. B. Chamley, A. G. G. M. Tielens, & S. D. Rodgers*. 482, L203 (1997)
- TIMMERMAN, R. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey*. 481, 343 (1997)
- TIMMES, F. X. Gamma-Ray Line Signals from ^{26}Al and ^{60}Fe in the Galaxies of the Local Group. *F. X. Timmes & S. E. Woosley*. 481, L81 (1997)
- TINÉ, S. Infrared Response of H_2 to X-Rays in Dense Clouds. *S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno*. 481, 282 (1997)
- TITARCHUK, L. G. Contemporaneous *IUE*, *EUVE*, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny*. 482, 167 (1997)
- TITARCHUK, LEV. Temporal and Spectral Properties of Comptonized Radiation and Its Applications. *Demosthenes Kazanas, Xin-Min Hua, & Lev Titarchuk*. 480, 735 (1997)
- Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk*. 482, L57 (1997)
- TITLE, ALAN M. The Distribution of Cell Sizes of the Solar Chromospheric Network. *Herman J. Hagenaar, Carolus J. Schrijver, & Alan M. Title*. 481, 988 (1997)
- TODO, Y. See OZAKI, MASAO, et al. Interactions of Convecting Magnetic Loops and Arcades.
- TOMASCH, A. D. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- TOMCZYK, S. Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk*. 482, 1065 (1997)
- TORBET, E. See BARWICK, S. W., et al. Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV.
- TORNIKOSKI, M. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- TORRES, C. A. O. On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin*. 482, L77 (1997)
- TOWNES, C. H. The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey*. 481, 343 (1997)
- See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- TRAN, H. S. Scattered Nuclear Continuum and Broad $H\alpha$ in Cygnus A. *P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich*. 482, L37 (1997)
- TRAUGER, JOHN T. See KRIST, JOHN E., et al. *Hubble Space Telescope* WFPC2 Images of Emission Nebulosity near XZ Tauri.
- TRAVERS, M. J. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- TREMAINE, SCOTT. See KORMENDY, JOHN, et al. Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B.
- TRESSE, L. See HAMMER, F., et al. Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$.
- TREVES, ALDO. On Electrostatic Positron Acceleration in the Accretion Flow onto Neutron Stars. *Roberto Turolla, Silvia Zane, Aldo Treves, & Andrei Illarionov*. 482, 377 (1997)
- TRIPP, TODD M. High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp*. 480, 216 (1997)
- TRUJILLO BUENO, JAVIER. Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti*. 482, L183 (1997)
- TSUBOI, MASATO. An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. *Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa*. 481, 263 (1997)
- TSUJI, TAKASHI. Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji*. 480, L39 (1997)
- TSURU, T. X-Ray Properties of Early-Type Galaxies as Observed with *ASCA*. *H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita*. 482, 133 (1997)
- TUCKER, W. X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx*. 482, 143 (1997)
- TUELLER, J. See CHENG, L. X., et al. A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center.
- TURCK-CHIEZE, SYLVAIN. Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ildio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil*. 480, 794 (1997)
- TURNER, EDWIN L. Statistics of Extreme Gravitational Lensing Events. II. The Finite Shear Case. *Yun Wang & Edwin L. Turner*. 482, 63 (1997)
- See KUNDIĆ, TOMISLAV, et al. A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant.
- TURNER, N. J. J. Models of the Spectral Energy Distributions of FU Orionis Stars. *N. J. J. Turner, P. Bodenheimer, & K. R. Bell*. 480, 754 (1997)
- TUROLLA, ROBERTO. On Electrostatic Positron Acceleration in the Accretion Flow onto Neutron Stars. *Roberto Turolla, Silvia Zane, Aldo Treves, & Andrei Illarionov*. 482, 377 (1997)
- TUTHILL, P. G. See MONNIER, J. D., et al. Nonuniform Dust Outflow Observed around Infrared Object NML Cygni.
- TUTUKOV, A. On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov*. 481, 127 (1997)
- UEDA, I. See MOISEEV, A., et al. Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV.
- See ORMES, J. F., et al. Antihelium in Cosmic Rays: A New Upper Limit and Its Significance.
- UEDA, Y. The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue*. 480, L115 (1997)
- UKITA, NOBUHARU. An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. *Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa*. 481, 263 (1997)

- ULMER, M. P. Evolution in the X-Ray Cluster Luminosity Function Revisited. *R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins.* 481, 644 (1997)
- UMEMURA, MASAYUKI. Self-similar Collapse of a Self-gravitating Viscous Disk. *Shin Mineshige & Masayuki Umemura.* 480, 167 (1997)
- UNGERECHTS, HANS. Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell.* 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb.* 482, 267 (1997)
- UNWIN, S. C. Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller.* 480, 596 (1997)
- URPIN, V. Convection in the Surface Layers of Neutron Stars. *Juan A. Miralles, V. Urpin, & K. Van Riper.* 480, 358 (1997)
- USHOMIRSKY, GREG. Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. *Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky.* 482, 442 (1997)
- USOV, VLADIMIR V. Low-Mass Normal-Matter Atmospheres of Strange Stars and their Radiation. *Vladimir V. Usov.* 481, L107 (1997)
- USTYUGOVA, G. V. Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. *M. M. Romanova, G. V. Ustyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace.* 482, 708 (1997)
- VALOTTO, CARLOS A. The Dependence of Galaxy Clustering on Luminosity. *Carlos A. Valotto & Diego G. Lambas.* 481, 594 (1997)
- VALTONEN, MAURI J. Outbursts in OJ 287: A New Test for the General Theory of Relativity. *Mauri J. Valtonen & Harry J. Lehto.* 481, L5 (1997)
- VANCURA, OLAF. The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)
- VANDEN BERK, D. E. See COLE, D. M., et al. Optical/Near-Infrared Observations of GRO J1744–28.
- VAN DER KLIS, MICHEL. Kiloherz Quasi-periodic Oscillation Peak Separation Is Not Constant in Scorpius X-1. *Michiel van der Klis, Rudy A. D. Wijnands, Keith Horne, & Wan Chen.* 481, L97 (1997)
- Discovery of Two Simultaneous Kiloherz Quasi-periodic Oscillations in KS 1731–260. *Rudy A. D. Wijnands & Michiel van der Klis.* 482, L65 (1997)
- VAN DER VELDE, J. C. See BORIONE, A., et al. A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar.
- VAN DRIEL-GESZTELYI, L. The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)
- VAN DYK, SCHUYLER D. Radio Detection of SN 1986E in NGC 4302. *Marcos J. Montes, Schuyler D. Van Dyk, Kurt W. Weiler, Richard A. Sramek, & Nino Panagia.* 482, L61 (1997)
- VAN PARADIJS, JAN. Postburst Quasi-periodic Oscillations from GRO J1744–28 and from the Rapid Burster. *Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou.* 482, L53 (1997)
- VAN RIPER, K. Convection in the Surface Layers of Neutron Stars. *Juan A. Miralles, V. Urpin, & K. Van Riper.* 480, 358 (1997)
- VASISHT, G. The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806–20. *D. A. Frail, G. Vasisht, & S. R. Kulkarni.* 480, L129 (1997)
- VASSILIADIS, EMANUEL. Hot Evolved Objects in Different Parent Galaxies: The Stellar Winds of Three Planetary Nebula Nuclei in the Large Magellanic Cloud. *Luciana Bianchi, Emanuel Vassiliadis, & Michael Dopita.* 480, 290 (1997)
- VAUCLAIR, G. See PROVENÇAL, J. L., et al. Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis).
- VAUGHAN, BRIAN A. See CHAKRABARTY, DEEPTO, et al. On the Correlation of Torque and Luminosity in GX 1+4.
- VÁZQUEZ, M. Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. *J. Hirzberger, M. Vázquez, J. A. Bonet, A. Hansmeier, & M. Sobotka.* 480, 406 (1997)
- VELUSAMY, T. See LANGER, W. D., et al. First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1.
- VENN, KIM A. Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls.* 482, 757 (1997)
- VENNES, S. The Accreting White Dwarf in the Close Binary EUVE J1016–053. *S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan.* 482, L73 (1997)
- VENNES, STÉPHANE. Hot White Dwarfs in the Extreme Ultraviolet Explorer Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis.* 480, 714 (1997)
- VERNER, D. A. Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. *G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno.* 481, L115 (1997)
- VESTRAND, W. THOMAS. See MCGLYNN, THOMAS A., et al. A Gamma-Ray Flare in NRAO 190.
- VIALLEFOND, F. High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond.* 482, 186 (1997)
- VIEGAS, S. M. A New Generation of Photoionization Codes: Three-dimensional Models. The Bipolar Planetary Nebula IC 4406. *R. Gruenwald, S. M. Viegas, & D. Brogière.* 480, 283 (1997)
- VILLUMSEN, JENS V. Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen.* 481, 1 (1997)
- Clustering of Galaxies in the Hubble Deep Field. *Jens V. Villumsen, Wolfram Freudling, & Luiz N. da Costa.* 481, 578 (1997)
- VISHNIAC, ETHAN T. Torque Reversal in Accretion-powered X-Ray Pulsars. *Insu Yi, J. Craig Wheeler, & Ethan T. Vishniac.* 481, L51 (1997)
- The Structure of Cooling Fronts in Accretion Disks. *Ethan T. Vishniac.* 482, 414 (1997)
- VITTORIO, NICOLA. Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperis, Alessandro Melchiorri, & Nicola Vittorio.* 480, 1 (1997)
- VOGEL, STUART N. The Mass Inflow Rate in the Barred Galaxy NGC 1530. *Michael W. Regan, Stuart N. Vogel, & Peter J. Teuben.* 482, L143 (1997)
- Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker.* 482, L195 (1997)
- VOGES, W. ROSAT Detection and High-Precision Localization of X-Ray Sources in the 1978 November 19 Gamma-Ray Burst Error Box. *M. Böer, C. Motch, J. Greiner, W. Voges, P. Kahabka, & H. Pedersen.* 481, L39 (1997)
- VOGT, NICOLE P. See LOWENTHAL, JAMES D., et al. Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field.
- VON MONTIGNY, C. See HUNTER, S. D., et al. EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane.
- Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny.* 482, 167 (1997)
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- WAN, LIN. Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan*. 480, 79 (1997)
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- WARD, M. J. Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean*. 481, 186 (1997)
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- Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian.* 482, 951 (1997)
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- Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk*. 482, L57 (1997)
- Discovery of Two Simultaneous Kilohertz Quasi-periodic Oscillations in KS 1731-260. *Rudy A. D. Wijnands & Michiel van der Klis*. 482, L65 (1997)
- Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. *Rachid Ouyed & Ralph E. Pudritz*. 482, 712 (1997)
- Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter*. 482, 919 (1997)
- Evidence for "Propeller" Effects in X-Ray Pulsars GX 1+4 and GRO J1744-28. *Wei Cui*. 482, L163 (1997)
- First Hubble Space Telescope Observations of Mira AB Wind-accreting Binary Systems. *Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan*. 482, L175 (1997)
- Survival of Planetary Systems. *William R. Ward*. 482, L211 (1997)

ASTROMETRY

- Spatial Resolution of the R Aquarii Binary System. *J. M. Hollis, J. A. Pedely, & R. G. Lyon*. 482, L85 (1997)
- Rates for Parallax-shifted Microlensing Events from Ground-based Observations of the Galactic Bulge. *Ari Buchalter & Marc Kamionkowski*. 482, 782 (1997)

ATOMIC DATA

- Effective Collision Strengths for Electron Impact Excitation of Inelastic Transitions in S III. *S. S. Tayal*. 481, 550 (1997)
- Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. *G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno*. 481, L115 (1997)
- High-Resolution Measurement of the K α Spectrum of Fe XXV-XVIII: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. *V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs*. 482, 1076 (1997)

ATOMIC PROCESSES

- Effective Collision Strengths for Electron Impact Excitation of Inelastic Transitions in S III. *S. S. Tayal*. 481, 550 (1997)
- Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. *J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh*. 481, 954 (1997)
- Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. *G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno*. 481, L115 (1997)
- High-Resolution Measurement of the K α Spectrum of Fe XXV-XVIII: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. *V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs*. 482, 1076 (1997)
- Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti*. 482, L183 (1997)
- The Abundance of Mg in the Interstellar Medium. *Edward L. Fitzpatrick*. 482, L199 (1997)

BALLOONS

Cosmic Microwave Background Anisotropy Observing Strategy Assessment. *Lloyd Knox*. 480, 72 (1997)

Antihelium in Cosmic Rays: A New Upper Limit and Its Significance. *J. F. Ormes, A. A. Moiseev, T. Saeki, K. Anraku, S. Orito, R. L. Golden, M. Imori, S. Inaba, B. L. Kimbell, N. Kimura, Y. Makida, H. Matsumoto, H. Matsunaga, J. W. Mitchell, M. Motoki, J. Nishimura, M. Nozaki, R. E. Streitmatter, J. Suzuki, K. Tanaka, I. Ueda, N. Yajima, T. Yamagami, A. Yamamoto, T. Yoshida, & K. Yoshimura (BESS Collaboration)*. 482, L187 (1997)

BLACK HOLE PHYSICS

Self-similar Collapse of a Self-gravitating Viscous Disk. *Shin Mineshige & Masayuki Umemura*. 480, 167 (1997)

Energy Extraction from a Relativistic Accretion Disk by Reflection Effect. *P. Hadrava, G. Bao, & E. Østgaard*. 480, 324 (1997)

Temporal and Spectral Properties of Comptonized Radiation and Its Applications. *Demosthenes Kazanas, Xin-Min Hua, & Lev Titarchuk*. 480, 735 (1997)

Jet Dynamics in Black Hole Fields: A Collimation Mechanism. *Fernando de Felice & Luca Carlotto*. 481, 116 (1997)

Outbursts in OJ 287: A New Test for the General Theory of Relativity. *Mauri J. Valtonen & Harry J. Lehto*. 481, L5 (1997)

Advection-dominated Accretion Model of the Black Hole V404 Cygni in Quiescence. *Ramesh Narayan, Didier Barret, & Jeffrey E. McClintock*. 482, 448 (1997)

Poynting Jets from Black Holes and Cosmological Gamma-Ray Bursts. *P. Mészáros & M. J. Rees*. 482, L29 (1997)

Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk*. 482, L57 (1997)

RXTE Observations of QPOs in the Black Hole Candidate GRS 1915+105. *E. H. Morgan, R. A. Remillard, & J. Greiner*. 482, 993 (1997)

Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B. *John Kormendy, Ralf Bender, John Magorrian, Scott Tremaine, Karl Gebhardt, Douglas Richstone, Alan Dressler, S. M. Faber, Carl Grillmair, & Tod R. Lauer*. 482, L139 (1997)

Black Hole Spin in X-Ray Binaries: Observational Consequences. *S. N. Zhang, Wei Cui, & Wan Chen*. 482, L155 (1997)

CELESTIAL MECHANICS, STELLAR DYNAMICS

Chaos and Noise in Galactic Potentials. *Salman Habib, Henry E. Kandrup, & M. Elaine Mahon*. 480, 155 (1997)

COMETS: INDIVIDUAL

Name: Hale-Bopp 1995 O1

Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. *K. R. Flammer, D. A. Mendis, & V. D. Shapiro*. 482, 1021 (1997)

Name: Halley

On the Rotational Population Distribution of C₂ in Comets. *K. S. Krishna Swamy*. 481, 1004 (1997)

CONVECTION

Convection in the Surface Layers of Neutron Stars. *Juan A. Miralles, V. Urpin, & K. Van Riper*. 480, 358 (1997)

Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. *William P. Abnett, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein*. 480, 395 (1997)

Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. *J. Hirtzberger, M. Vázquez, J. A. Bonet, A. Hanslmeier, & M. Sobotka*. 480, 406 (1997)

Detection of Zonal Shear Flows beneath the Sun's Surface from f-Mode Frequency Splitting. *A. G. Kosovichev & J. Schou*. 482, L207 (1997)

COSMIC STRINGS

The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson*. 482, 22 (1997)

COSMOLOGY: COSMIC MICROWAVE BACKGROUND

Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperis, Alessandro Melchiorri, & Nicola Vittorio*. 480, 1 (1997)

The 4 Year COBE Normalization and Large-Scale Structure. *Emory F. Bunn & Martin White*. 480, 6 (1997)

Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? *Max Tegmark, Andy N. Taylor, & Alan F. Heavens*. 480, 22 (1997)

Cosmic Microwave Background Anisotropy Observing Strategy Assessment. *Lloyd Knox*. 480, 72 (1997)

Contribution of Extragalactic Infrared Sources to Cosmic Microwave Background Foreground Anisotropy. *Eric Gawiser & George F. Smoot*. 480, L1 (1997)

Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163. *W. L. Holzapfel, M. Arnaud, P. A. R. Ade, S. E. Church, M. L. Fischer, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange*. 480, 449 (1997)

New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. *C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones*. 480, L83 (1997)

How to Make Maps from Cosmic Microwave Background Data without Losing Information. *Max Tegmark*. 480, L87 (1997)

Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmologies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Bandy, & Krzysztof M. Górski*. 481, 22 (1997)

Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange*. 481, 35 (1997)

Relativistic Corrections in the Determination of H₀ from X-Ray and Sunyaev-Zeldovich Measurements. *Yoel Rephaeli & Doron Yankovitch*. 481, L55 (1997)

The Power Spectrum of Microwave Background Temperature Anisotropies Measured by the Tenerife Experiment. *F. Ariño-Barandela, S. Gottlöber, & J. P. Mücke*. 482, 1 (1997)

Measuring Polarization in the Cosmic Microwave Background. *Uroš Seljak*. 482, 6 (1997)

A Detection of Bright Features in the Microwave Background. *M. S. Kowit, E. S. Cheng, D. A. Cottingham, D. J. Fixsen, C. A. Inman, S. S. Meyer, L. A. Page, J. L. Puchalla, J. E. Ruhl, & R. F. Silverberg*. 482, 17 (1997)

Galactic Microwave Emission at Degree Angular Scales. *Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack*. 482, L17 (1997)

Determining Cosmic Microwave Background Anisotropies in the Presence of Foregrounds. *Scott Dodelson*. 482, 577 (1997)

COSMOLOGY: DARK MATTER

Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperis, Alessandro Melchiorri, & Nicola Vittorio*. 480, 1 (1997)

Self-similar Spherical Collapse Revisited: A Comparison between Gas and Dark Matter Dynamics. *Romain Teyssier, Jean-Pierre Chizé, & Jean-Michel Alimi*. 480, 36 (1997)

Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . *Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack*. 480, 43 (1997)

Old Galaxies at High Redshift and the Cosmological Constant. *Lawrence M. Krauss*. 480, 466 (1997)

Background Radiation Constraints on Supersymmetric Weakly Interacting Particles. *J. M. Overduin & P. S. Wesson*. 480, 470 (1997)

Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen*. 481, 1 (1997)

Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. *Russell W. Strickland & David N. Schramm*. 481, 571 (1997)

Infall Regions of Galaxy Clusters. *Antonaldo Diaferio & Margaret J. Geller*. 481, 633 (1997)

The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould*. 482, 98 (1997)

Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. *G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods*. 482, 648 (1997)

- Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner.* 482, L121 (1997)
- COSMOLOGY: DIFFUSE RADIATION**
- A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall.* 480, 173 (1997)
- Background Radiation Constraints on Supersymmetric Weakly Interacting Particles. *J. M. Overduin & P. S. Wesson.* 480, 470 (1997)
- EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane. *S. D. Hunter, D. L. Bertsch, J. R. Catelli, T. M. Dame, S. W. Digel, B. L. Dingus, J. A. Esposito, C. E. Fichtel, R. C. Hartman, G. Kanbach, D. A. Kniffen, Y. C. Lin, H. A. Mayer-Hasselwander, P. F. Michelson, C. von Montigny, R. Mukherjee, P. L. Nolan, E. Schneid, P. Sreekumar, P. Thaddeus, & D. J. Thompson.* 481, 205 (1997)
- Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen.* 481, 809 (1997)
- COSMOLOGY: DISTANCE SCALE**
- Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163. *W. L. Holzapfel, M. Arnaud, P. A. R. Ade, S. E. Church, M. L. Fischer, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 480, 449 (1997)
- Old Galaxies at High Redshift and the Cosmological Constant. *Lawrence M. Krauss.* 480, 466 (1997)
- Relativistic Corrections in the Determination of H_0 from X-Ray and Sunyaev-Zeldovich Measurements. *Yoel Rephaeli & Doron Yankovitch.* 481, L55 (1997)
- A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant. *Tomislav Kundić, Edwin L. Turner, Wesley N. Colley, J. Richard Gott III, James E. Rhoads, Yun Wang, Louis E. Bergeron, Karen A. Gloria, Daniel C. Long, Sangeeta Malhotra, & Joachim Wambsganss.* 482, 75 (1997)
- Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 68 (1997)
- Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky.* 482, 588 (1997)
- Cosmic Time Dilation. *I. E. Segal.* 482, L115 (1997)
- COSMOLOGY: EARLY UNIVERSE**
- Molecules at High Redshift: The Evolution of the Cool Phase of Protogalactic Disks. *Colin A. Norman & Marco Spaans.* 480, 145 (1997)
- Keck Observation of Lithium in a Cool Halo Dwarf Common Proper-Motion Pair. *Constantine P. Deliyannis & Sean G. Ryan.* 480, L43 (1997)
- Potential Measurement of the Luminosity Function of 158 Micron [C II] at High Redshifts: A Test of Galaxy Formation Models. *Antony A. Stark.* 481, 587 (1997)
- Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuharu Kohyama, & Satoshi Nozawa.* 482, 33 (1997)
- Quasar Variability and Gravitational Microlensing. *M. R. S. Hawkins & A. N. Taylor.* 482, L5 (1997)
- COSMOLOGY: GRAVITATIONAL LENSING**
- Extreme Microlensing toward the Galactic Bulge. *Andrew Gould.* 480, 188 (1997)
- Einstein Radii from Binary-Source Lensing Events. *Cheongho Han & Andrew Gould.* 480, 196 (1997)
- A Stratified Framework for Scalar-Tensor Theories of Modified Dynamics. *R. H. Sanders.* 480, 492 (1997)
- Statistics of Extreme Gravitational Lensing Events. II. The Finite Shear Case. *Yun Wang & Edwin L. Turner.* 482, 63 (1997)
- A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant. *Tomislav Kundić, Edwin L. Turner, Wesley N. Colley, J. Richard Gott III, James E. Rhoads, Yun Wang, Louis E. Bergeron, Karen A. Gloria, Daniel C. Long, Sangeeta Malhotra, & Joachim Wambsganss.* 482, 75 (1997)
- Detection Rates for Close Binaries via Microlensing. *B. Scott Gaudi & Andrew Gould.* 482, 83 (1997)
- Shear and Ellipticity in Gravitational Lenses. *C. R. Keeton, C. S. Kochanek, & U. Seljak.* 482, 604 (1997)
- Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. *G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods.* 482, 648 (1997)
- Rates for Parallax-shifted Microlensing Events from Ground-based Observations of the Galactic Bulge. *Ari Buchalter & Marc Kamionkowski.* 482, 782 (1997)
- COSMOLOGY: LARGE-SCALE STRUCTURE OF UNIVERSE**
- The 4 Year COBE Normalization and Large-Scale Structure. *Emory F. Bunn & Martin White.* 480, 6 (1997)
- Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? *Max Tegmark, Andy N. Taylor, & Alan F. Heavens.* 480, 22 (1997)
- Self-similar Spherical Collapse Revisited: A Comparison between Gas and Dark Matter Dynamics. *Romain Teyssier, Jean-Pierre Chizé, & Jean-Michel Alimi.* 480, 36 (1997)
- Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . *Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack.* 480, 43 (1997)
- Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ramatunga, R. E. Griffiths, & S. Casertano.* 480, 59 (1997)
- Old Galaxies at High Redshift and the Cosmological Constant. *Lawrence M. Krauss.* 480, 466 (1997)
- New Cosmological Structures on Medium Angular Scales Detected with the Tenerife Experiments. *C. M. Gutiérrez, S. Hancock, R. D. Davies, R. Rebolo, R. A. Watson, R. J. Hoyland, A. N. Lasenby, & A. W. Jones.* 480, L83 (1997)
- Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen.* 481, 1 (1997)
- Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmologies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Banday, & Krzysztof M. Górski.* 481, 22 (1997)
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 481, 35 (1997)
- Cumulant Correlators from the APM. *István Szapudi & Alexander S. Szalay.* 481, L1 (1997)
- Clustering of Galaxies in the Hubble Deep Field. *Jens V. Villumsen, Wolfram Freudling, & Luiz N. da Costa.* 481, 578 (1997)
- The Dependence of Galaxy Clustering on Luminosity. *Carlos A. Valotto & Diego G. Lambas.* 481, 594 (1997)
- The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson.* 482, 22 (1997)
- Beyond Genus Statistics: A Unifying Approach to the Morphology of Cosmic Structure. *Jens Schmalzing & Thomas Buchert.* 482, L1 (1997)
- Comparing Single-Cycle and Multicycle Explosive Scenarios for the Formation of Voids. *Oswaldo D. Miranda & Reuven Opher.* 482, 573 (1997)
- Peculiar Velocities of Clusters in Cold Dark Matter Models. *Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner.* 482, L121 (1997)
- COSMOLOGY: OBSERVATIONS**
- Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ramatunga, R. E. Griffiths, & S. Casertano.* 480, 59 (1997)
- Cosmic Microwave Background Anisotropy Observing Strategy Assessment. *Lloyd Knox.* 480, 72 (1997)
- Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 79 (1997)
- The Gaseous Environments of Powerful Extended Radio Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 96 (1997)
- Faint Blue Galaxies and Merging: The Evolution of the Luminosity Function. *A. Cavaliere & N. Menci.* 480, 132 (1997)

- Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163. *W. L. Holzapfel, M. Arnaud, P. A. R. Ade, S. E. Church, M. L. Fischer, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 480, 449 (1997)
- Distant Galaxy Clusters Identified from Optical Background Fluctuations. *Dennis Zaritsky, Amy E. Nelson, Julianne J. Dalcanton, & Anthony H. Gonzalez.* 480, L91 (1997)
- A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)
- Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmologies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Banday, & Krzysztof M. Górski.* 481, 22 (1997)
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 481, 35 (1997)
- Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. *F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse.* 481, 49 (1997)
- The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)
- Clustering of Galaxies in the Hubble Deep Field. *Jens V. Villumsen, Wolfgang Freudling, & Luiz N. da Costa.* 481, 578 (1997)
- A Detection of Bright Features in the Microwave Background. *M. S. Kowit, E. S. Cheng, D. A. Cottingham, D. J. Fixsen, C. A. Inman, S. S. Meyer, L. A. Page, J. L. Puchalla, J. E. Ruhl, & R. F. Silverberg.* 482, 17 (1997)
- Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti.* 482, 41 (1997)
- The Luminosity-Temperature Relation at $z = 0.4$ for Clusters of Galaxies. *R. F. Mushotzky & C. A. Scharf.* 482, L13 (1997)
- Toward More Precise Photometric Redshifts: Calibration via CCD Photometry. *Robert J. Brunner, Andrew J. Connolly, Alexander S. Szalay, & Matthew A. Bershad.* 482, L21 (1997)
- Determining Cosmic Microwave Background Anisotropies in the Presence of Foregrounds. *Scott Dodelson.* 482, 577 (1997)
- Time Dilation in the Supernova Light Curve and the Variable Mass Hypothesis. *J. V. Narlikar & H. C. Arp.* 482, L119 (1997)
- COSMOLOGY: THEORY**
- The 4 Year COBE Normalization and Large-Scale Structure. *Emory F. Bunn & Martin White.* 480, 6 (1997)
- Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? *Max Tegmark, Andy N. Taylor, & Alan F. Heavens.* 480, 22 (1997)
- Self-similar Spherical Collapse Revisited: A Comparison between Gas and Dark Matter Dynamics. *Romain Teyssier, Jean-Pierre Chizé, & Jean-Michel Alimi.* 480, 36 (1997)
- Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . *Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack.* 480, 43 (1997)
- Old Galaxies at High Redshift and the Cosmological Constant. *Lawrence M. Krauss.* 480, 466 (1997)
- A Stratified Framework for Scalar-Tensor Theories of Modified Dynamics. *R. H. Sanders.* 480, 492 (1997)
- Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen.* 481, 1 (1997)
- Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. *Russell W. Strickland & David N. Schramm.* 481, 571 (1997)
- The Power Spectrum of Microwave Background Temperature Anisotropies Measured by the Tenerife Experiment. *F. Ariño-Barandela, S. Gottlöber, & J. P. Mücke.* 482, 1 (1997)
- Measuring Polarization in the Cosmic Microwave Background. *Uroš Seljak.* 482, 6 (1997)
- Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuharu Kohyama, & Satoshi Nozawa.* 482, 33 (1997)
- Deriving the Quasar Luminosity Function from Accretion Disk Instabilities. *Aneta Siemiginowska & Martin Elvis.* 482, L9 (1997)
- Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. *Marco Spaans & C. Marcello Carollo.* 482, L93 (1997)
- Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky.* 482, 588 (1997)
- Shear and Ellipticity in Gravitational Lenses. *C. R. Keeton, C. S. Kochanek, & U. Seljak.* 482, 604 (1997)
- Lyman-Alpha Absorption Lines from Minipancakes. *Biman B. Nath.* 482, 621 (1997)
- Cosmic Time Dilation. *I. E. Segal.* 482, L115 (1997)
- DENSE MATTER**
- Enhancement of Nuclear Reaction Rates in Dense Stellar Matter: A Path-Integral Monte Carlo Simulation Study. *Shuji Ogata.* 481, 883 (1997)
- Oscillating Shells: A Model for a Variable Cosmic Object. *Dario Núñez.* 482, 963 (1997)
- ELEMENTARY PARTICLES**
- Background Radiation Constraints on Supersymmetric Weakly Interacting Particles. *J. M. Overduin & P. S. Wesson.* 480, 470 (1997)
- Langmuir Wave Generation through a Neutrino Beam Instability. *S. J. Hardy & D. B. Melrose.* 480, 705 (1997)
- Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen.* 481, 1 (1997)
- Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. *J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh.* 481, 954 (1997)
- The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson.* 482, 22 (1997)
- On Electrostatic Positron Acceleration in the Accretion Flow onto Neutron Stars. *Roberto Turolla, Silvia Zane, Aldo Treves, & Andrei Illarionov.* 482, 377 (1997)
- Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian.* 482, 951 (1997)
- Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV. *S. W. Barwick, J. J. Beatty, A. Bhattacharya, C. R. Bower, C. J. Chaput, S. Couu, G. A. de Nolfo, J. Knapp, D. M. Lowder, S. McKee, D. Müller, J. A. Musser, S. L. Nutter, E. Schneider, S. P. Swordy, G. Tarlé, A. D. Tomasch, & E. Torbet (The HEAT Collaboration).* 482, L191 (1997)
- EQUATION OF STATE**
- Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji.* 480, L39 (1997)
- ERRATA, ADDENDA**
- A Minnesota Automated Plate Scanner Catalog of Galaxies behind the Virgo Cluster and toward Its Antipode: Erratum. *G. Lyle Hoffman, John M. Dickey, Nanyao Y. Lu, & René Fromhold-Treu.* 480, 447 (1997) (Orig. paper in 473, 822, 331-E2 (1996))
- VLA H92 α and H115 β Recombination Line Observations of the Galactic Center H II Regions: The Sickle (G0.18–0.04) and the Pistol (G0.15–0.05). *Cornelia C. Lang, W. M. Goss, & D. O. S. Wood.* 481, 1016 (1997) (Orig. paper in 474, 275 (1997))
- Deep ROSAT HRI Observations of the Orion Nebula Region: Erratum. *Marc Gagné, Jean-Pierre Caillault, & John R. Stauffer.* 482, 569 (1997) (Orig. paper in 445, 280, 136-D2 (1995))
- Discovery of a Subparsec Jet 4000 Radii from the Central Schwarzschild Engine of NGC 4258: Erratum. *J. R. Herrnstein, J. M. Moran, L. J. Greenhill, P. J. Diamond, M. Miyoshi, N. Nakai, & M. Inoue.* 482, L113 (1997) (Orig. paper in 475, L17 (1997))
- Two-dimensional Ultraviolet Spectral Typing of O-Type Stars: Erratum. *Laura R. Penny, Douglas R. Gies, & William G. Bagnuolo, Jr.* 482, 1085 (1997) (Orig. paper in 460, 906, 84-E13 (1996))
- Optical Observations of GRO J1655–40 in Quiescence. I. A Precise Mass for the Black Hole Primary: Erratum. *Jerome A. Orosz & Charles D. Bailyn.* 482, 1086 (1997) (Orig. paper in 477, 876 (1997))
- Cosmic-Ray Antiproton Flux in the Energy Range from 200 to 600 MeV. *A. Moiseev, K. Yoshimura, I. Ueda, K. Anraku, R. Golden, M. Imori, S. Inaba, B. Kimbell, N. Kimura, Y. Makida, H. Matsumoto,*

- H. Matsunaga, J. Mitchell, M. Motoki, J. Nishimura, M. Nozaki, S. Orito, J. Ormes, T. Saeki, E. S. Seo, S. Stochaj, R. Streitmater, J. Suzuki, K. Tanaka, N. Yajima, T. Yamagami, A. Yamamoto, & T. Yoshida. 482, 1087 (1997) (Orig. paper in 474, 479 (1997))

GALAXIES: ABUNDANCES

- Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse. 481, 49 (1997)
- High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields. 481, 174 (1997)
- Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González. 481, L19 (1997)
- Lack of Evolution in the Iron Abundance in Clusters of Galaxies and Implications for the Global Star Formation Rate at High Redshift. R. F. Mushotzky & M. Loewenstein. 481, L63 (1997)
- The Chemical Evolution of Starburst Nucleus Galaxies. R. Coziol, T. Contini, E. Davoust, & S. Considère. 481, L67 (1997)
- Gamma-Ray Line Signals from ^{26}Al and ^{60}Fe in the Galaxies of the Local Group. F. X. Timmes & S. E. Woosley. 481, L81 (1997)
- X-Ray Properties of Early-Type Galaxies as Observed with ASCA. H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita. 482, 133 (1997)
- X-Ray Emission from the Fornax Cluster. C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx. 482, 143 (1997)
- A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman. 482, 685 (1997)

GALAXIES: ACTIVE

- Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. Greg F. Wellman, Ruth A. Daly, & Lin Wan. 480, 79 (1997)
- The Gaseous Environments of Powerful Extended Radio Sources. Greg F. Wellman, Ruth A. Daly, & Lin Wan. 480, 96 (1997)
- Hubble Space Telescope Imaging of $z \geq 0.4$ Quasar Galaxies Selected by Quasar Radio and Optical Properties. Eric J. Hooper, Chris D. Impey, & Craig B. Foltz. 480, L95 (1997)
- The Identification of EGRET Sources with Flat-Spectrum Radio Sources. J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik. 481, 95 (1997)
- Evidence for Nonlinear X-Ray Variability from the Broad-Line Radio Galaxy 3C 390.3. Karen M. Leighly & Paul T. O'Brien. 481, L15 (1997)
- A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney. 482, 114 (1997)
- Scattered Nuclear Continuum and Broad H α in Cygnus A. P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich. 482, L37 (1997)
- The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. A. S. Wilson, L. Binette, & T. Storchi-Bergmann. 482, L131 (1997)
- The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. John S. Mulchaey & Michael W. Regan. 482, L135 (1997)

GALAXIES: BL LACERTAE OBJECTS: GENERAL

- On the Soft X-Ray Spectra of γ -loud Blazars. Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi. 480, 534 (1997)
- The Canada-France-Hawaii Telescope Imaging Survey of BL Lacertae Objects. II. Clustering Environments. Ron Wurtz, John T. Stocke, E. Ellingson, & H. K. C. Yee. 480, 547 (1997)

GALAXIES: BL LACERTAE OBJECTS: INDIVIDUAL

Name: BL Lacertae Objects

- Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae. M. Catanese, C. W. Akerlof, S. D. Biller, P. Boyle, J. H. Buckley, D. A. Carter-Lewis, M. F. Cawley, V. Connaughton, B. L. Dingus, D. J. Fegan, C. E. Fichtel, J. P. Finley, J. A. Gaidos, W. K. Gear, R. C. Hartman,

- A. M. Hillas, F. Krennrich, R. C. Lamb, R. W. Lessard, Y. C. Lin, J. E. McEnery, A. P. Marscher, G. Mohanty, R. Mukherjee, J. Quinn, E. I. Robson, A. J. Rodgers, H. J. Rose, F. W. Samuelson, G. Sembroski, M. S. Schubnell, J. A. Stevens, H. Teräsranta, D. J. Thompson, T. C. Weekes, C. Wilson, & J. Zweerink. 480, 562 (1997)

Name: Markarian 421

- Detection of Multi-TeV Emission from Markarian 421. F. Krennrich, C. W. Akerlof, J. H. Buckley, A. M. Burdett, D. A. Carter-Lewis, M. F. Cawley, M. Catanese, V. Connaughton, D. J. Fegan, J. P. Finley, J. A. Gaidos, R. C. Lamb, R. Lessard, J. E. McEnery, G. Mohanty, J. Quinn, A. J. Rodgers, H. J. Rose, M. S. Schubnell, G. H. Sembroski, T. C. Weekes, C. Wilson, & J. Zweerink. 481, 758 (1997)

GALAXIES: CLUSTERS: GENERAL

- Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFC2 Data. L. W. Neuschaefer, M. Im, K. U. Ratnatunga, R. E. Griffiths, & S. Casertano. 480, 59 (1997)
- Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. Greg F. Wellman, Ruth A. Daly, & Lin Wan. 480, 79 (1997)
- The Gaseous Environments of Powerful Extended Radio Sources. Greg F. Wellman, Ruth A. Daly, & Lin Wan. 480, 96 (1997)
- An Adaptive Hierarchical Particle-Mesh Code with Isolated Boundary Conditions. Sergio Gelato, David F. Chernoff, & Ira Wasserman. 480, 115 (1997)
- The H I Companions of H II Galaxies and Low Surface Brightness Dwarf Galaxies. Christopher L. Taylor. 480, 524 (1997)
- The Canada-France-Hawaii Telescope Imaging Survey of BL Lacertae Objects. II. Clustering Environments. Ron Wurtz, John T. Stocke, E. Ellingson, & H. K. C. Yee. 480, 547 (1997)
- Distant Galaxy Clusters Identified from Optical Background Fluctuations. Dennis Zaritsky, Amy E. Nelson, Julianne J. Dalcanton, & Anthony H. Gonzalez. 480, L91 (1997)
- Merger Rate of Equal-Mass Spherical Galaxies. Junichiro Makino & Piet Hut. 481, 83 (1997)
- Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. Russell W. Strickland & David N. Schramm. 481, 571 (1997)
- Clustering of Galaxies in the Hubble Deep Field. Jens V. Villumsen, Wolfram Freudling, & Luiz N. da Costa. 481, 578 (1997)
- The Dependence of Galaxy Clustering on Luminosity. Carlos A. Valotto & Diego G. Lambas. 481, 594 (1997)
- Infall Regions of Galaxy Clusters. Antonaldo Diaferio & Margaret J. Geller. 481, 633 (1997)
- Evolution in the X-Ray Cluster Luminosity Function Revisited. R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins. 481, 644 (1997)
- Relativistic Corrections in the Determination of H_0 from X-Ray and Sunyaev-Zeldovich Measurements. Yoel Rephaeli & Doron Yankovitch. 481, L55 (1997)
- The Dependence of Globular Cluster Number on Density for Abell Cluster Central Galaxies. John P. Blakeslee. 481, L59 (1997)
- Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti. 482, 41 (1997)
- The Luminosity-Temperature Relation at $z = 0.4$ for Clusters of Galaxies. R. F. Mushotzky & C. A. Scharf. 482, L13 (1997)
- Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. Kuri Roettiger, James M. Stone, & Richard F. Mushotzky. 482, 588 (1997)
- The Quasar-Quasar Correlation Function in the Palomar Transit Grism Survey. Tomislav Kundić. 482, 631 (1997)
- The Twin Paradoxes of Compact Groups: Discordant Excess Muted but the Dynamical Puzzle Persists. Jack W. Sulentic. 482, 640 (1997)
- Peculiar Velocities of Clusters in Cold Dark Matter Models. Stefano Borgani, Luiz N. da Costa, Wolfram Freudling, Riccardo Giovanelli, Martha P. Haynes, John Salzer, & Gary Wegner. 482, L121 (1997)

GALAXIES: CLUSTERS: INDIVIDUAL

Name: Abell 1689

- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange. 481, 35 (1997)

Name: Abell 2163

Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163. *W. L. Holzapfel, M. Arnaud, P. A. R. Ade, S. E. Church, M. L. Fischer, P. D. Maukopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 480, 449 (1997)

Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Maukopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange.* 481, 35 (1997)

Name: Coma I

Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 68 (1997)

Name: Hydra A

Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies. *Y. Ikebe, K. Makishima, H. Ezawa, Y. Fukazawa, M. Hirayama, H. Honda, Y. Ishisaki, K. Kikuchi, H. Kubo, T. Murakami, T. Ohashi, T. Takahashi, & K. Yamashita.* 481, 660 (1997)

Name: Leo I

Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 68 (1997)

Alphanumeric: 2139-4434

A Group of Red, Ly α -emitting, High-Redshift Galaxies. *Paul J. Francis, Bruce E. Woodgate, & Anthony C. Danks.* 482, L25 (1997)

Alphanumeric: A2163

Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. *G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods.* 482, 648 (1997)

Alphanumeric: A2597

ROSAT X-Ray Observations of the Cooling Flow Cluster A2597. *Craig L. Sarazin & Brian R. McNamara.* 480, 203 (1997)

GALAXIES: COOLING FLOWS

Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 79 (1997)

ROSAT X-Ray Observations of the Cooling Flow Cluster A2597. *Craig L. Sarazin & Brian R. McNamara.* 480, 203 (1997)

GALAXIES: DISTANCES AND REDSHIFTS

A Stratified Framework for Scalar-Tensor Theories of Modified Dynamics. *R. H. Sanders.* 480, 492 (1997)

Quasar Absorbing Galaxies at $z \leq 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach.* 480, 568 (1997)

Tip of the Red Giant Branch Distances to Galaxies. IV. Sextans B. *Shoko Sakai, Barry F. Madore, & Wendy L. Freedman.* 480, 589 (1997)

Distant Galaxy Clusters Identified from Optical Background Fluctuations. *Dennis Zaritsky, Amy E. Nelson, Julianne J. Dalcanton, & Anthony H. Gonzalez.* 480, L91 (1997)

Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field. *James D. Lowenthal, David C. Koo, Rafael Guzmán, Jesús Gallego, Andrew C. Phillips, S. M. Faber, Nicole P. Vogt, Garth D. Illingworth, & Caryl Gronwall.* 481, 673 (1997)

Optical Substructures in 48 Galaxy Clusters: New Insights from a Multiscale Analysis. *M. Girardi, E. Escalera, D. Fadda, G. Giuricin, F. Mardirossian, & M. Mezzetti.* 482, 41 (1997)

The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars. *C. Alcock, R. A. Allsman, D. Alves, T. S. Axelrod, A. C. Becker, D. P. Bennett, K. H. Cook, K. C. Freeman, K. Griest, J. Guern, M. J. Lehner, S. L. Marshall, D. Minniti, B. A. Peterson, M. R. Pratt, P. J. Quinn, A. W. Rodgers, W. Sutherland, & D. L. Welch.* 482, 89 (1997)

A Group of Red, Ly α -emitting, High-Redshift Galaxies. *Paul J. Francis, Bruce E. Woodgate, & Anthony C. Danks.* 482, L25 (1997)

The Twin Paradoxes of Compact Groups: Discordant Excess Muted but the Dynamical Puzzle Persists. *Jack W. Sulentic.* 482, 640 (1997)

Time Dilation in the Supernova Light Curve and the Variable Mass Hypothesis. *J. V. Narlikar & H. C. Arp.* 482, L119 (1997)

GALAXIES: ELLIPTICAL AND LENTICULAR, CD

On the Origin of Cusps in Stellar Systems. *N. W. Evans & J. L. Collett.* 480, L103 (1997)

Luminous Red Stars in Local Group Dwarf Elliptical Galaxies: An Intermediate-Age Population? *David Martínez-Delgado & Antonio Aparicio.* 480, L107 (1997)

On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov.* 481, 127 (1997)

Ellipticals with Kinematically Distinct Cores: V - I Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes.* 481, 710 (1997)

The Dependence of Globular Cluster Number on Density for Abell Cluster Central Galaxies. *John P. Blakeslee.* 481, L59 (1997)

Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 68 (1997)

X-Ray Properties of Early-Type Galaxies as Observed with ASCA. *H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita.* 482, 133 (1997)

X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx.* 482, 143 (1997)

Shear and Ellipticity in Gravitational Lenses. *C. R. Keeton, C. S. Kochanek, & U. Seljak.* 482, 604 (1997)

On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)

A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. *Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman.* 482, 685 (1997)

GALAXIES: EVOLUTION

Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFPC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ramatunga, R. E. Griffiths, & S. Casertano.* 480, 59 (1997)

Chaos and Noise in Galactic Potentials. *Salman Habib, Henry E. Kandrup, & M. Elaine Mahon.* 480, 155 (1997)

Spectroscopy of Close Companions to Quasi-stellar Objects and the Ages of Interaction-induced Starbursts. *Gabriela Canalizo & Alan Stockton.* 480, L5 (1997)

Old Galaxies at High Redshift and the Cosmological Constant. *Lawrence M. Krauss.* 480, 466 (1997)

The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kuksrud, Renyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu.* 480, 481 (1997)

A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)

Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. *F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse.* 481, 49 (1997)

Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101. *William H. Waller, Ralph C. Bohlin, Robert H. Cornett, Michael N. Fanelli, Wendy L. Freedman, Jesse K. Hill, Barry F. Madore, Susan G. Neff, Joel D. Offenberg, Robert W. O'Connell, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 481, 169 (1997)

High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Gannett, E. D. Skillman, R. J. Dufour, & G. A. Shields.* 481, 174 (1997)

The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)

Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. *Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González.* 481, L19 (1997)

Are Low Surface Brightness Disks Young? *Paolo Padoan, Raul Jimenez, & Vincenzo Antonuccio-Delego.* 481, L27 (1997)

Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field. *James D. Lowenthal, David C. Koo, Rafael Guzmán, Jesús Gallego, Andrew C. Phillips, S. M. Faber, Nicole P. Vogt, Garth D. Illingworth, & Caryl Gronwall.* 481, 673 (1997)

Gas Mass Fractions and the Evolution of Spiral Galaxies. *Stacy S. McGaugh & W. J. G. de Blok.* 481, 689 (1997)

- The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considère.* 481, L67 (1997)
- Toward More Precise Photometric Redshifts: Calibration via CCD Photometry. *Robert J. Brunner, Andrew J. Connolly, Alexander S. Szalay, & Matthew A. Bershad.* 482, L21 (1997)
- Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. *Marco Spaans & C. Marcello Carollo.* 482, L93 (1997)
- On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)
- A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. *Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman.* 482, 685 (1997)
- GALAXIES: FORMATION**
- Cosmic Microwave Background Anisotropy at Degree Angular Scales and the Thermal History of the Universe. *Paolo de Bernardis, Amedeo Balbi, Giancarlo De Gasperi, Alessandro Melchiorri, & Nicola Vittorio.* 480, 1 (1997)
- Molecules at High Redshift: The Evolution of the Cool Phase of Protogalactic Disks. *Colin A. Norman & Marco Spaans.* 480, 145 (1997)
- On the Origin of Cusps in Stellar Systems. *N. W. Evans & J. L. Collett.* 480, L103 (1997)
- Cosmic Microwave Background Anisotropy in COBE DMR-normalized Open and Flat- Λ Cold Dark Matter Cosmogonies. *Bharat Ratra, Naoshi Sugiyama, Anthony J. Banday, & Krzysztof M. Górski.* 481, 22 (1997)
- The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)
- Are Low Surface Brightness Disks Young? *Paolo Padoan, Raul Jimenez, & Vincenzo Antonuccio-Delogu.* 481, L27 (1997)
- Potential Measurement of the Luminosity Function of 158 Micron [C II] at High Redshifts: A Test of Galaxy Formation Models. *Antony A. Stark.* 481, 587 (1997)
- QSO Metal Absorption Systems at High Redshift and the Signature of Hierarchical Galaxy Formation. *Michael Rauch, Martin G. Haehnelt, & Matthias Steinmetz.* 481, 601 (1997)
- Feedback, Disk Self-Regulation, and Galaxy Formation. *Joseph Silk.* 481, 703 (1997)
- Lack of Evolution in the Iron Abundance in Clusters of Galaxies and Implications for the Global Star Formation Rate at High Redshift. *R. F. Mushotzky & M. Loewenstein.* 481, L63 (1997)
- The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considère.* 481, L67 (1997)
- Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. *Marco Spaans & C. Marcello Carollo.* 482, L93 (1997)
- Comparing Single-Cycle and Multicycle Explosive Scenarios for the Formation of Voids. *Oswaldo D. Miranda & Reuven Opher.* 482, 573 (1997)
- The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers.* 482, 659 (1997)
- GALAXIES: FUNDAMENTAL PARAMETERS**
- Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
- The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)
- Are Low Surface Brightness Disks Young? *Paolo Padoan, Raul Jimenez, & Vincenzo Antonuccio-Delogu.* 481, L27 (1997)
- Gas Mass Fractions and the Evolution of Spiral Galaxies. *Stacy S. McGaugh & W. J. G. de Blok.* 481, 689 (1997)
- Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 68 (1997)
- Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun.* 482, 104 (1997)
- Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Abmudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)
- GALAXIES: GENERAL**
- Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
- GALAXIES: INDIVIDUAL**
- Messier Number: M31**
- Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls.* 482, 757 (1997)
- Messier Number: M81**
- Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)
- Messier Number: M82**
- Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams.* 482, 182 (1997)
- Messier Number: M101**
- Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101. *William H. Waller, Ralph C. Bohlin, Robert H. Cornett, Michael N. Fanelli, Wendy L. Freedman, Jesse K. Hill, Barry F. Madore, Susan G. Neff, Joel D. Offenberg, Robert W. O'Connell, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 481, 169 (1997)
- NGC Number: NGC 1052**
- Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Abmudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)
- NGC Number: NGC 1143**
- Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)
- NGC Number: NGC 1144**
- Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)
- NGC Number: NGC 1399**
- X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx.* 482, 143 (1997)
- NGC Number: NGC 1530**
- The Mass Inflow Rate in the Barred Galaxy NGC 1530. *Michael W. Regan, Stuart N. Vogel, & Peter J. Teuben.* 482, L143 (1997)
- NGC Number: NGC 1569**
- The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)
- NGC Number: NGC 2442**
- NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)
- NGC Number: NGC 3031**
- Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)
- NGC Number: NGC 3504**
- Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Abmudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)
- NGC Number: NGC 3628**
- High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond.* 482, 186 (1997)
- NGC Number: NGC 3783**
- On the Nature of Ultraviolet and X-Ray Absorption in NGC 3783. *Joseph C. Shields & Fred Hamann.* 481, 752 (1997)
- NGC Number: NGC 4151**
- Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels.* 482, 173 (1997)
- NGC Number: NGC 4214**
- An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk. *Michael N. Fanelli, William W. Waller, Denise A. Smith, Wendy L. Freedman, Barry Madore, Susan G. Neff, Robert W. O'Connell, Morton S. Roberts, Ralph Bohlin, Andrew M. Smith, & Theodore P. Stecher.* 481, 735 (1997)

- NGC Number: NGC 4486B**
Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B. *John Kormendy, Ralf Bender, John Magorrian, Scott Tremaine, Karl Gebhardt, Douglas Richstone, Alan Dressler, S. M. Faber, Carl Grillmair, & Tod R. Lauer.* 482, L139 (1997)
- NGC Number: NGC 4945**
The Distribution of H₂O Maser Emission in the Nucleus of NGC 4945. *L. J. Greenhill, J. M. Moran, & J. R. Herrnstein.* 481, L23 (1997)
- NGC Number: NGC 5253**
Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)
- NGC Number: NGC 6240**
Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
- NGC Number: NGC 7582**
Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy.* 481, 179 (1997)
- Name: Arp 118**
Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)
- Name: Cygnus A**
Scattered Nuclear Continuum and Broad H α in Cygnus A. *P. M. Ogle, M. H. Cohen, J. S. Miller, H. S. Tran, R. A. E. Fosbury, & R. W. Goodrich.* 482, L37 (1997)
- Name: Markarian 1259**
A New Superwind Wolf-Rayet Galaxy Markarian 1259. *Yoshiaki Taniguchi, & Roberto Terlevich.* 480, L9 (1997)
- Name: Sextans B**
Tip of the Red Giant Branch Distances to Galaxies. IV. Sextans B. *Shoko Sakai, Barry F. Madore, & Wendy L. Freedman.* 480, 589 (1997)
- Alphanumeric: 3C 390.3**
Evidence for Nonlinear X-Ray Variability from the Broad-Line Radio Galaxy 3C 390.3. *Karen M. Leighly & Paul T. O'Brien.* 481, L15 (1997)
- Alphanumeric: IC 694**
High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond.* 482, 186 (1997)
- Alphanumeric: I Zw 18**
High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields.* 481, 174 (1997)
- GALAXIES: INTERACTIONS**
Faint Blue Galaxies and Merging: The Evolution of the Luminosity Function. *A. Cavaliere & N. Menci.* 480, 132 (1997)
Spectroscopy of Close Companions to Quasi-stellar Objects and the Ages of Interaction-induced Starbursts. *Gabriela Canalizo & Alan Stockton.* 480, L5 (1997)
Sinking Satellites and Tilting Disk Galaxies. *Siqin Huang & R. G. Carlberg.* 480, 503 (1997)
The H I Companions of H II Galaxies and Low Surface Brightness Dwarf Galaxies. *Christopher L. Taylor.* 480, 524 (1997)
Merger Rate of Equal-Mass Spherical Galaxies. *Junichiro Makino & Piet Hut.* 481, 83 (1997)
Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi.* 481, 132 (1997)
Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101. *William H. Waller, Ralph C. Bohlin, Robert H. Cornett, Michael N. Fanelli, Wendy L. Freedman, Jesse K. Hill, Barry F. Madore, Susan G. Neff, Joel D. Offenberg, Robert W. O'Connell, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 481, 169 (1997)
Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)
- NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)
- GALAXIES: INTERGALACTIC MEDIUM**
The Gaseous Environments of Powerful Extended Radio Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 96 (1997)
ROSAT X-Ray Observations of the Cooling Flow Cluster A2597. *Craig L. Sarazin & Brian R. McNamara.* 480, 203 (1997)
Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies. *Y. Ikebe, K. Makishima, H. Ezawa, Y. Fukazawa, M. Hirayama, H. Honda, Y. Ishisaki, K. Kikuchi, H. Kubo, T. Murakami, T. Ohashi, T. Takahashi, & K. Yamashita.* 481, 660 (1997)
Lack of Evolution in the Iron Abundance in Clusters of Galaxies and Implications for the Global Star Formation Rate at High Redshift. *R. F. Mushotzky & M. Loewenstein.* 481, L63 (1997)
Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky.* 482, 588 (1997)
Lyman-Alpha Absorption Lines from Minipancakes. *Biman B. Nath.* 482, 621 (1997)
- GALAXIES: IRREGULAR**
High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields.* 481, 174 (1997)
An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk. *Michael N. Fanelli, William W. Waller, Denise A. Smith, Wendy L. Freedman, Barry Madore, Susan G. Neff, Robert W. O'Connell, Morton S. Roberts, Ralph Bohlin, Andrew M. Smith, & Theodore P. Stecher.* 481, 735 (1997)
- GALAXIES: ISM**
First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)
Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. *Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-A. Nyman.* 480, 607 (1997)
Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)
Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. *F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse.* 481, 49 (1997)
Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi.* 481, 132 (1997)
Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
High Carbon in I Zwicky 18: New Results from Hubble Space Telescope Spectroscopy. *D. R. Garnett, E. D. Skillman, R. J. Dufour, & G. A. Shields.* 481, 174 (1997)
Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)
Gas Mass Fractions and the Evolution of Spiral Galaxies. *Stacy S. McGaugh & W. J. G. de Blok.* 481, 689 (1997)
Feedback, Disk Self-Regulation, and Galaxy Formation. *Joseph Silk.* 481, 703 (1997)
Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)
Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams.* 482, 182 (1997)
High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio

- Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond.* 482, 186 (1997)
- The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)
- The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. *A. S. Wilson, L. Binette, & T. Storchi-Bergmann.* 482, L131 (1997)
- GALAXIES: JETS**
- Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller.* 480, 596 (1997)
- Jet Dynamics in Black Hole Fields: A Collimation Mechanism. *Fernando de Felice & Luca Carlotto.* 481, 116 (1997)
- Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Martí, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi.* 482, L33 (1997)
- Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. *Rachid Ouyed & Ralph E. Pudritz.* 482, 712 (1997)
- Simulation of the Kelvin-Helmholtz Instability in the Magnetized Slab Jet. *K. W. Min.* 482, 733 (1997)
- GALAXIES: KINEMATICS AND DYNAMICS**
- Chaos and Noise in Galactic Potentials. *Salman Habib, Henry E. Kandrup, & M. Elaine Mahon.* 480, 155 (1997)
- Self-similar Collapse of a Self-gravitating Viscous Disk. *Shin Mineshige & Masayuki Umemura.* 480, 167 (1997)
- Sinking Satellites and Tilting Disk Galaxies. *Siqin Huang & R. G. Carlberg.* 480, 503 (1997)
- On the Origin of Cusps in Stellar Systems. *N. W. Evans & J. L. Collett.* 480, L103 (1997)
- Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi.* 481, 132 (1997)
- The Distribution of H₂O Maser Emission in the Nucleus of NGC 4945. *L. J. Greenhill, J. M. Moran, & J. R. Herrnstein.* 481, L23 (1997)
- Feedback, Disk Self-Regulation, and Galaxy Formation. *Joseph Silk.* 481, 703 (1997)
- Ellipticals with Kinematically Distinct Cores: V – I Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes.* 481, 710 (1997)
- NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)
- High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond.* 482, 186 (1997)
- The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers.* 482, 659 (1997)
- Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B. *John Kormendy, Ralf Bender, John Magorrian, Scott Tremaine, Karl Gebhardt, Douglas Richstone, Alan Dressler, S. M. Faber, Carl Grillmair, & Tod R. Lauer.* 482, L139 (1997)
- The Mass Inflow Rate in the Barred Galaxy NGC 1530. *Michael W. Regan, Stuart N. Vogel, & Peter J. Teuben.* 482, L143 (1997)
- GALAXIES: LOCAL GROUP**
- Luminous Red Stars in Local Group Dwarf Elliptical Galaxies: An Intermediate-Age Population? *David Martinez-Delgado & Antonio Aparicio.* 480, L107 (1997)
- Gamma-Ray Line Signals from ²⁶Al and ⁶⁰Fe in the Galaxies of the Local Group. *F. X. Timmes & S. E. Woosley.* 481, L81 (1997)
- GALAXIES: LUMINOSITY FUNCTION, MASS FUNCTION**
- Faint Blue Galaxies and Merging: The Evolution of the Luminosity Function. *A. Cavaliere & N. Menci.* 480, 132 (1997)
- A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)
- Evolution in the X-Ray Cluster Luminosity Function Revisited. *R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins.* 481, 644 (1997)
- Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun.* 482, 104 (1997)
- GALAXIES: MAGELLANIC CLOUDS**
- Hot Evolved Objects in Different Parent Galaxies: The Stellar Winds of Three Planetary Nebula Nuclei in the Large Magellanic Cloud. *Luciana Bianchi, Emanuel Vassiliadis, & Michael Dopita.* 480, 290 (1997)
- First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)
- Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. *Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-A. Nyman.* 480, 607 (1997)
- Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)
- The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars. *C. Alcock, R. A. Allsman, D. Alves, T. S. Axelrod, A. C. Becker, D. P. Bennett, K. H. Cook, K. C. Freeman, K. Griest, J. Guern, M. J. Lehner, S. L. Marshall, D. Minniti, B. A. Peterson, M. R. Pratt, P. J. Quinn, A. W. Rodgers, W. Sutherland, & D. L. Welch.* 482, 89 (1997)
- Use of Red Supergiant Spectral Features as Age Indicators in Starburst Regions. *Y. D. Mayya.* 482, L149 (1997)
- GALAXIES: MAGNETIC FIELDS**
- The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. *Benjamin D. G. Chandran.* 482, 156 (1997)
- GALAXIES: NUCLEI**
- On the Origin of Cusps in Stellar Systems. *N. W. Evans & J. L. Collett.* 480, L103 (1997)
- Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
- The Distribution of H₂O Maser Emission in the Nucleus of NGC 4945. *L. J. Greenhill, J. M. Moran, & J. R. Herrnstein.* 481, L23 (1997)
- Ellipticals with Kinematically Distinct Cores: V – I Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes.* 481, 710 (1997)
- Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)
- A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney.* 482, 114 (1997)
- The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. *A. S. Wilson, L. Binette, & T. Storchi-Bergmann.* 482, L131 (1997)
- Spectroscopic Evidence for a Supermassive Black Hole in NGC 4486B. *John Kormendy, Ralf Bender, John Magorrian, Scott Tremaine, Karl Gebhardt, Douglas Richstone, Alan Dressler, S. M. Faber, Carl Grillmair, & Tod R. Lauer.* 482, L139 (1997)
- GALAXIES: PHOTOMETRY**
- Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. *F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse.* 481, 49 (1997)
- Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
- Ellipticals with Kinematically Distinct Cores: V – I Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes.* 481, 710 (1997)
- Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)
- Calibration of the Fundamental Plane Zero Point in the Leo I Group and an Estimate of the Hubble Constant. *Jens Hjorth & Nial R. Tanvir.* 482, 68 (1997)
- Toward More Precise Photometric Redshifts: Calibration via CCD Photometry. *Robert J. Brunner, Andrew J. Connolly, Alexander S. Szalay, & Matthew A. Bershadsky.* 482, L21 (1997)

GALAXIES: QUASARS: ABSORPTION LINES

Quasar Absorbing Galaxies at $z < 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach.* 480, 568 (1997)

QSO Metal Absorption Systems at High Redshift and the Signature of Hierarchical Galaxy Formation. *Michael Rauch, Martin G. Haehnelt, & Matthias Steinmetz.* 481, 601 (1997)

Lyman-Alpha Absorption Lines from Minipancakes. *Biman B. Nath.* 482, 621 (1997)

GALAXIES: QUASARS: GENERAL

Self-similar Collapse of a Self-gravitating Viscous Disk. *Shin Mineshige & Masayuki Umemura.* 480, 167 (1997)

On the Soft X-Ray Spectra of γ -loud Blazars. *Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi.* 480, 534 (1997)

Hubble Space Telescope Imaging of $z \geq 0.4$ Quasar Galaxies Selected by Quasar Radio and Optical Properties. *Eric J. Hooper, Chris D. Impey, & Craig B. Foltz.* 480, L95 (1997)

The Identification of EGRET Sources with Flat-Spectrum Radio Sources. *J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik.* 481, 95 (1997)

Quasar Variability and Gravitational Microlensing. *M. R. S. Hawkins & A. N. Taylor.* 482, L5 (1997)

Deriving the Quasar Luminosity Function from Accretion Disk Instabilities. *Aneta Siemiginowska & Martin Elvis.* 482, L9 (1997)

The Quasar-Quasar Correlation Function in the Palomar Transit Grism Survey. *Tomislav Kundić.* 482, 631 (1997)

GALAXIES: QUASARS: INDIVIDUAL

Alphanumeric: 0957+561

A Robust Determination of the Time Delay in 0957+561A, B and a Measurement of the Global Value of Hubble's Constant. *Tomislav Kundić, Edwin L. Turner, Wesley N. Colley, J. Richard Gott III, James E. Rhoads, Yun Wang, Louis E. Bergeron, Karen A. Gloria, Daniel C. Long, Sangeeta Malhotra, & Joachim Wambsganss.* 482, 75 (1997)

Alphanumeric: 3C 273

High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp.* 480, 216 (1997)

Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, J. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny.* 482, 167 (1997)

Alphanumeric: 3C 323.1

Spectroscopy of Close Companions to Quasi-stellar Objects and the Ages of Interaction-induced Starbursts. *Gabriela Canalizo & Alan Stockton.* 480, L5 (1997)

Alphanumeric: 3C 336

Quasar Absorbing Galaxies at $z < 1$. I. Deep Imaging and Spectroscopy in the Field of 3C 336. *Charles C. Steidel, Mark Dickinson, David M. Meyer, Kurt L. Adelberger, & Kenneth R. Sembach.* 480, 568 (1997)

Alphanumeric: 3C 345

Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller.* 480, 596 (1997)

Alphanumeric: NRAO 190

A Gamma-Ray Flare in NRAO 190. *Thomas A. McGlynn, Robert C. Hartman, Steven D. Bloom, Margo Aller, Hugh Aller, Alexei V. Filippenko, Aaron J. Barth, W. K. Gear, Alan P. Marscher, John R. Mattox, W. Reich, E. I. Robson, Jochen Schramm, J. A. Stevens, H. Teräsranta, M. Tornikoski, W. Thomas Vestrand, Stefan Wagner, & Anke Heines.* 481, 625 (1997)

Alphanumeric: OJ 287

Outbursts in OJ 287: A New Test for the General Theory of Relativity. *Mauri J. Valtonen & Harry J. Lehto.* 481, L5 (1997)

Alphanumeric: PG 1700+518

Spectroscopy of Close Companions to Quasi-stellar Objects and the Ages of Interaction-induced Starbursts. *Gabriela Canalizo & Alan Stockton.* 480, L5 (1997)

Alphanumeric: PKS 2135-147

Spectroscopy of Close Companions to Quasi-stellar Objects and the Ages of Interaction-induced Starbursts. *Gabriela Canalizo & Alan Stockton.* 480, L5 (1997)

GALAXIES: SEYFERT

On the Nature of Ultraviolet and X-Ray Absorption in NGC 3783. *Joseph C. Shields & Fred Hamann.* 481, 752 (1997)

Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)

A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney.* 482, 114 (1997)

Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels.* 482, 173 (1997)

Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Almudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)

The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. *A. S. Wilson, L. Binette, & T. Storchi-Bergmann.* 482, L131 (1997)

The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. *John S. Mulchaey & Michael W. Regan.* 482, L135 (1997)

GALAXIES: SPIRAL

Contribution of Extragalactic Infrared Sources to Cosmic Microwave Background Foreground Anisotropy. *Eric Gawiser & George F. Smoot.* 480, L1 (1997)

On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov.* 481, 127 (1997)

Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101. *William H. Waller, Ralph C. Bohlin, Robert H. Cornett, Michael N. Fanelli, Wendy L. Freedman, Jesse K. Hill, Barry F. Madore, Susan G. Neff, Joel D. Offenberg, Robert W. O'Connell, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 481, 169 (1997)

Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy.* 481, 179 (1997)

Gas Mass Fractions and the Evolution of Spiral Galaxies. *Stacy S. McGaugh & W. J. G. de Blok.* 481, 689 (1997)

NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)

Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)

The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. *John S. Mulchaey & Michael W. Regan.* 482, L135 (1997)

The Mass Inflow Rate in the Barred Galaxy NGC 1530. *Michael W. Regan, Stuart N. Vogel, & Peter J. Teuben.* 482, L143 (1997)

GALAXIES: STARBURST

A New Superwind Wolf-Rayet Galaxy Markarian 1259. *Yoshiaki Taniguchi, & Roberto Terlevich.* 480, L9 (1997)

Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi.* 481, 132 (1997)

Reexamining the Lyman Continuum in Starburst Galaxies Observed with the Hopkins Ultraviolet Telescope. *Mark Hurwitz, Patrick Jelinsky, & W. Van Dyke Dixon.* 481, L31 (1997)

Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)

Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field. *James D. Lowenthal, David C. Koo, Rafael Guzmán, Jesús Gallego, Andrew C. Phillips, S. M. Faber, Nicole P. Vogt, Garth D. Illingworth, & Caryl Gronwall.* 481, 673 (1997)

The Chemical Evolution of Starburst Nucleus Galaxies. *R. Coziol, T. Contini, E. Davoust, & S. Considère.* 481, L67 (1997)

Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)

A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney.* 482, 114 (1997)

- Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Supergiants. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams.* 482, 182 (1997)
- High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H₂α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond.* 482, 186 (1997)
- Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Abmudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)
- The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)
- Use of Red Supergiant Spectral Features as Age Indicators in Starburst Regions. *Y. D. Mayya.* 482, L149 (1997)
- GALAXIES: STAR CLUSTERS**
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- A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)
- Cumulant Correlators from the APM. *István Szapudi & Alexander S. Szalay.* 481, L1 (1997)
- The Dependence of Galaxy Clustering on Luminosity. *Carlos A. Valotto & Diego G. Lambas.* 481, 594 (1997)
- Low Surface Brightness Galaxies in the Local Universe. III. Implications for the Field Galaxy Luminosity Function. *D. Sprayberry, C. D. Impey, M. J. Irwin, & G. D. Bothun.* 482, 104 (1997)
- The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers.* 482, 659 (1997)
- GALAXIES: STELLAR CONTENT**
- The H I Companions of H II Galaxies and Low Surface Brightness Dwarf Galaxies. *Christopher L. Taylor.* 480, 524 (1997)
- Luminous Red Stars in Local Group Dwarf Elliptical Galaxies: An Intermediate-Age Population? *David Martínez-Delgado & Antonio Aparicio.* 480, L107 (1997)
- Canada-France Redshift Survey. XIV. Spectral Properties of Field Galaxies up to $z = 1$. *F. Hammer, H. Flores, S. J. Lilly, David Crampton, O. Le Fèvre, C. Rola, G. Mallen-Ornelas, D. Schade, & L. Tresse.* 481, 49 (1997)
- On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov.* 481, 127 (1997)
- Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
- Line-Strength Indices in Bright Spheroidal Galaxies: Evidence for a Stellar Population Dichotomy between Spheroidal and Elliptical Galaxies. *Javier Gorgas, Santos Pedraz, Rafael Guzmán, Nicolás Cardiel, & J. Jesús González.* 481, L19 (1997)
- Feedback, Disk Self-Regulation, and Galaxy Formation. *Joseph Silk.* 481, 703 (1997)
- Ellipticals with Kinematically Distinct Cores: V - I Color Images with WFPC2. *C. Marcella Carollo, Marijn Franx, Garth D. Illingworth, & Duncan A. Forbes.* 481, 710 (1997)
- NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)
- A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney.* 482, 114 (1997)
- On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)
- A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. *Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman.* 482, 685 (1997)
- Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls.* 482, 757 (1997)
- GALAXIES: STRUCTURE**
- Evidence for Galaxy Interactions/Mergers from Medium Deep Survey WFPC2 Data. *L. W. Neuschaefer, M. Im, K. U. Ratnatunga, R. E. Griffiths, & S. Casertano.* 480, 59 (1997)
- Chaos and Noise in Galactic Potentials. *Salman Habib, Henry E. Kandrup, & M. Elaine Mahon.* 480, 155 (1997)
- Sinking Satellite Disk Galaxies. I. Shell Formation Preceded by Cessation of Star Formation. *Makoto Kojima & Masafumi Noguchi.* 481, 132 (1997)
- Discovery of a Boxy Peanut-shaped Bulge in the Near-Infrared. *A. C. Quillen, L. E. Kuchinski, J. A. Frogel, & D. L. DePoy.* 481, 179 (1997)
- NGC 2442: Tidal Encounters and the Evolution of Spiral Galaxies. *J. Christopher Mihos & Gregory D. Bothun.* 481, 741 (1997)
- X-Ray Emission from the Fornax Cluster. *C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx.* 482, 143 (1997)
- The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. *John S. Mulchaey & Michael W. Regan.* 482, L135 (1997)
- GALAXIES: THE GALAXY**
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- GALAXY: ABUNDANCES**
- Galactic Cosmic-Ray Manganese: *Ulysses* High-Energy Telescope Results. *M. A. DuVernois.* 481, 241 (1997)
- The Galactic Oxygen Abundance Gradient. *Stephen J. Smartt & William Robert J. Rolleston.* 481, L47 (1997)
- Gamma-Ray Line Signals from ²⁶Al and ⁶⁰Fe in the Galaxies of the Local Group. *F. X. Timmes & S. E. Woosley.* 481, L81 (1997)
- The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould.* 482, 98 (1997)
- The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)
- GALAXY: CENTER**
- An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. *Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa.* 481, 263 (1997)
- Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. *Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach.* 482, L41 (1997)
- SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas.* 482, L45 (1997)
- GALAXY: EVOLUTION**
- The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. *John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris.* 480, 246 (1997)
- The Galactic Oxygen Abundance Gradient. *Stephen J. Smartt & William Robert J. Rolleston.* 481, L47 (1997)
- GALAXY: GENERAL**
- Rates for Parallax-shifted Microlensing Events from Ground-based Observations of the Galactic Bulge. *Ari Buchalter & Marc Kamionkowski.* 482, 782 (1997)
- GALAXY: GLOBULAR CLUSTERS: GENERAL**
- A Universal Formation Mechanism for Open and Globular Clusters in Turbulent Gas. *Bruce G. Elmegreen & Yuri N. Efremov.* 480, 235 (1997)
- UIT Detection of Hot Stars in the Globular Cluster NGC 362. *Ben Dorman, Ronak Y. Shah, Robert W. O'Connell, Wayne B. Landsman, Robert T. Rood, Ralph C. Bohlin, Susan G. Neff, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 480, L31 (1997)
- The Dependence of Globular Cluster Number on Density for Abell Cluster Central Galaxies. *John P. Blakeslee.* 481, L59 (1997)
- Capture of Field Stars by Globular Clusters in Dense Bulge Regions. *Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbay.* 482, L49 (1997)
- Time-Resolved Ultraviolet Observations of the Globular Cluster X-Ray Source in NGC 6624: The Shortest Known Period Binary System. *Scott F. Anderson, Bruce Margon, Eric W. Deutsch, Ronald A. Downes, & Richard G. Allen.* 482, L69 (1997)
- GALAXY: GLOBULAR CLUSTERS: INDIVIDUAL**
- Messier Number: M5**
- Observations of Two Millisecond Pulsars in the Globular Cluster NGC 5904. *S. B. Anderson, A. Wolszczan, S. R. Kulkarni, & T. A. Prince.* 482, 870 (1997)

Messier Number: M15

The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)

Messier Number: M71

Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan.* 481, 782 (1997)

NGC Number: NGC 362

UIT Detection of Hot Stars in the Globular Cluster NGC 362. *Ben Dorman, Ronak Y. Shah, Robert W. O'Connell, Wayne B. Landsman, Robert T. Rood, Ralph C. Bohlin, Susan G. Neff, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 480, L31 (1997)

NGC Number: NGC 2808

Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808. *Craig Sosin, Ben Dorman, S. George Djorgovski, Giampaolo Piotto, R. Michael Rich, Ivan R. King, James Liebert, E. Sterl Phinney, & Alvio Renzini.* 480, L35 (1997)

NGC Number: NGC 5466

The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemec.* 482, 203 (1997)

Name: HP 1

Capture of Field Stars by Globular Clusters in Dense Bulge Regions. *Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbay.* 482, L49 (1997)

GALAXY: HALO

High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp.* 480, 216 (1997)

The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. *John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris.* 480, 246 (1997)

A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. *J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen.* 481, 775 (1997)

The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould.* 482, 98 (1997)

GALAXY: KINEMATICS AND DYNAMICS

High-Velocity Rain: The Terminal Velocity Model of Galactic Infall. *Robert A. Benjamin & Laura D'Arcy.* 481, 764 (1997)

A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. *J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen.* 481, 775 (1997)

Capture of Field Stars by Globular Clusters in Dense Bulge Regions. *Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbay.* 482, L49 (1997)

GALAXY: OPEN CLUSTERS AND ASSOCIATIONS: GENERAL

A Universal Formation Mechanism for Open and Globular Clusters in Turbulent Gas. *Bruce G. Elmegreen & Yuri N. Efremov.* 480, 235 (1997)

Clustering of Young Stars in Taurus, Ophiuchus, and the Orion Trapezium. *M. Simon.* 482, L81 (1997)

GALAXY: OPEN CLUSTERS AND ASSOCIATIONS: INDIVIDUAL**Messier Number: M67**

S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. *W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher.* 481, L93 (1997)

GALAXY: STRUCTURE

A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Soderoski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall.* 480, 173 (1997)

EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane. *S. D. Hunter, D. L. Bertsch, J. R. Catelli, T. M. Dame, S. W. Digel, B. L. Dingus, J. A. Esposito, C. E. Fichtel, R. C. Hartman,*

G. Kanbach, D. A. Kniffen, Y. C. Lin, H. A. Mayer-Hasselwander, P. F. Michelson, C. von Montigny, R. Mukherjee, P. L. Nolan, E. Schneid, P. Sreekumar, P. Thaddeus, & D. J. Thompson. 481, 205 (1997)

GAMMA RAYS: BURSTS

X-Ray Emission of Gamma-Ray Bursts. *M. Tavani.* 480, 351 (1997)

The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806-20. *D. A. Frail, G. Vasishth, & S. R. Kulkarni.* 480, L129 (1997)

ROSAT Detection and High-Precision Localization of X-Ray Sources in the 1978 November 19 Gamma-Ray Burst Error Box. *M. Böer, C. Motch, J. Greiner, W. Voges, P. Kahabka, & H. Pedersen.* 481, L39 (1997)

Pair Production Absorption Troughs in Gamma-Ray Burst Spectra: A Potential Distance Discriminator. *Matthew G. Baring & Alice K. Harding.* 481, L85 (1997)

Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. *Matthew G. Baring & Alice K. Harding.* 482, 372 (1997)

Formation of Millisecond Pulsars from Accretion-induced Collapse and Constraints on Pulsar Gamma-Ray Burst Models. *Insu Yi & Eric G. Blackman.* 482, 383 (1997)

Poynting Jets from Black Holes and Cosmological Gamma-Ray Bursts. *P. Mészáros & M. J. Rees.* 482, L29 (1997)

Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. *A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros.* 482, 942 (1997)

Results from Gamma-Ray Optical Counterpart Search Experiment: A Real Time Search for Gamma-Ray Burst Optical Counterparts. *Brian Lee, Carl Akerlof, David Band, Scott Barthelmy, Paul Butterworth, Thomas Cline, Donald Ferguson, Neil Gehrels, & Kevin Hurley.* 482, L125 (1997)

GAMMA RAYS: GENERAL

A Maximum Entropy Map of the 511 keV Positron Annihilation Line Emission Distribution near the Galactic Center. *L. X. Cheng, M. Leventhal, D. M. Smith, W. R. Purcell, J. Tueller, A. Connors, D. Dixon, R. L. Kinzer, & J. G. Skibo.* 481, L43 (1997)

GAMMA RAYS: OBSERVATIONS

Optical/Near-Infrared Observations of GRO J1744-28. *D. M. Cole, D. E. Vanden Berk, S. A. Sevenson, M. C. Miller, J. M. Quashnock, R. C. Nichol, D. Q. Lamb, K. Hurley, P. Blanco, C. Lidman, & K. Glazebrook.* 480, 377 (1997)

On the Soft X-Ray Spectra of γ -loud Blazars. *Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi.* 480, 534 (1997)

Detection of Gamma Rays with $E > 100$ MeV from BL Lacertae. *M. Catanese, C. W. Akerlof, S. D. Biller, P. Boyle, J. H. Buckley, D. A. Carter-Lewis, M. F. Cawley, V. Connaughton, B. L. Dingus, D. J. Fegan, C. E. Fichtel, J. P. Finley, J. A. Gaidos, W. K. Gear, R. C. Hartman, A. M. Hillas, F. Krennrich, R. C. Lamb, R. W. Lessard, Y. C. Lin, J. E. McEnery, A. P. Marscher, G. Mohanty, R. Mukherjee, J. Quinn, E. I. Robson, A. J. Rodgers, H. J. Rose, F. W. Samuelson, G. Sembroski, M. S. Schubnell, J. A. Stevens, H. Teräsranta, D. J. Thompson, T. C. Weekes, C. Wilson, & J. Zweerink.* 480, 562 (1997)

The Identification of EGRET Sources with Flat-Spectrum Radio Sources. *J. R. Mattox, J. Schachter, L. Molnar, R. C. Hartman, & A. R. Patnaik.* 481, 95 (1997)

EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane. *S. D. Hunter, D. L. Bertsch, J. R. Catelli, T. M. Dame, S. W. Digel, B. L. Dingus, J. A. Esposito, C. E. Fichtel, R. C. Hartman, G. Kanbach, D. A. Kniffen, Y. C. Lin, H. A. Mayer-Hasselwander, P. F. Michelson, C. von Montigny, R. Mukherjee, P. L. Nolan, E. Schneid, P. Sreekumar, P. Thaddeus, & D. J. Thompson.* 481, 205 (1997)

A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar. *A. Borione, M. A. Catanese, M. C. Chantell, C. E. Covault, J. W. Cronin, B. E. Fick, L. F. Fortson, J. F. Fowler, K. G. Gibbs, M. A. K. Glasmacher, K. D. Green, D. B. Kieda, J. Matthews, B. J. Newport, D. F. Nitz, R. A. Ong, L. J. Rosenberg, D. Sinclair, & J. C. van der Velde.* 481, 313 (1997)

A Gamma-Ray Flare in NRAO 190. *Thomas A. McGlynn, Robert C. Hartman, Steven D. Bloom, Margo Aller, Hugh Aller, Alexei V. Filippenko, Aaron J. Barth, W. K. Gear, Alan P. Marscher, John R. Mattox, W. Reich, E. I. Robson, Jochen Schramm, J. A. Stevens, H. Teräsranta, M. Tornikoski, W. Thomas Vestrand, Stefan Wagner, & Anke Heines.* 481, 625 (1997)

- Detection of Multi-TeV Emission from Markarian 421. *F. Krennrich, C. W. Akerlof, J. H. Buckley, A. M. Burdett, D. A. Carter-Lewis, M. F. Cawley, M. Catanese, V. Connaughton, D. J. Fegan, J. P. Finley, J. A. Gaidos, R. C. Lamb, R. Lessard, J. E. McEnery, G. Mohanty, J. Quinn, A. J. Rodgers, H. J. Rose, M. S. Schubnell, G. H. Sembroski, T. C. Weekes, C. Wilson, & J. Zweerink.* 481, 758 (1997)
- Long-Term Monitoring of NGC 4151 by OSSE. *W. N. Johnson, K. McNaron-Brown, J. D. Kurfess, A. A. Zdziarski, P. Magdziarz, & N. Gehrels.* 482, 173 (1997)
- GAMMA RAYS: THEORY**
- Pair Production Absorption Troughs in Gamma-Ray Burst Spectra: A Potential Distance Discriminator. *Matthew G. Baring & Alice K. Harding.* 481, L85 (1997)
- Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. *Matthew G. Baring & Alice K. Harding.* 482, 372 (1997)
- A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis.* 482, 874 (1997)
- Binary-induced Neutron Star Compression, Heating, and Collapse. *G. J. Mathews & J. R. Wilson.* 482, 929 (1997)
- GRAVITATION**
- Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. *Philip Kaaret, Eric C. Ford, & Kaiyou Chen.* 480, L27 (1997)
- HYDRODYNAMICS**
- Self-similar Spherical Collapse Revisited: A Comparison between Gas and Dark Matter Dynamics. *Romain Teyssier, Jean-Pierre Chizèze, & Jean-Michel Alimi.* 480, 36 (1997)
- An Adaptive Hierarchical Particle-Mesh Code with Isolated Boundary Conditions. *Sergio Gelato, David F. Chernoff, & Ira Wasserman.* 480, 115 (1997)
- Numerical Modeling of Tidal Effects in Polytropic Accretion Disks. *Patrick Godon.* 480, 329 (1997)
- Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya.* 480, 694 (1997)
- Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. *Fumitaka Nakamura & Tomoyuki Hanawa.* 480, 701 (1997)
- Effects of Non-LTE Radiative Loss and Partial Ionization on the Structure of the Transition Region. *J. Chae, H. S. Yun, & A. I. Poland.* 480, 817 (1997)
- Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. *J. Michael Owen & Jens V. Villumsen.* 481, 1 (1997)
- The Density Spike in Cosmic-Ray-modified Shocks: Formation, Evolution, and Instability. *Byung-Il Jun & T. W. Jones.* 481, 253 (1997)
- The Fate of Merging White Dwarfs. *Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch.* 481, 355 (1997)
- On Synchronization in Detached Close Binaries: Reply to Rieutord and Zahn. *Monique Tassoul & Jean-Louis Tassoul.* 481, 363 (1997)
- Formation of Solar Calcium H and K Bright Grains. *Mats Carlsson & Robert F. Stein.* 481, 500 (1997)
- QSO Metal Absorption Systems at High Redshift and the Signature of Hierarchical Galaxy Formation. *Michael Rauch, Martin G. Haehnelt, & Matthias Steinmetz.* 481, 601 (1997)
- The Structure of Cosmic String Wakes. *Andrew Sornborger, Robert Brandenberger, Bruce Fryxell, & Kevin Olson.* 482, 22 (1997)
- Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams.* 482, 182 (1997)
- Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M. Martí, A. P. Marscher, J. M. Ibáñez, & A. Alberdi.* 482, L33 (1997)
- Collimation of Astrophysical Jets: The Proto-Planetary Nebula He 3-1475. *Kazimierz J. Borkowski, John M. Blondin, & J. Patrick Harrington.* 482, L97 (1997)
- Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. *Kurt Roettiger, James M. Stone, & Richard F. Mushotzky.* 482, 588 (1997)
- The Formation of Disk Galaxies. *Julianne J. Dalcanton, David N. Spergel, & F. J. Summers.* 482, 659 (1997)
- The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. *Richard P. Nelson & William D. Langer.* 482, 796 (1997)
- Compressible Turbulence. *V. M. Canuto.* 482, 827 (1997)
- Kelvin-Helmholtz and Thermal-Dynamic Instabilities with Self-Gravity: A New Gravitational Interface Instability. *James H. Hunter, Jr., Rodney W. Whitaker, & Richard V. E. Lovelace.* 482, 852 (1997)
- Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. *A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros.* 482, 942 (1997)
- Fluctuations in Stellar Winds and Their Possible Connections to the Wind Mass Flux. *Tzihong Chiueh.* 482, L179 (1997)
- INFRARED: GALAXIES**
- Contribution of Extragalactic Infrared Sources to Cosmic Microwave Background Foreground Anisotropy. *Eric Gawiser & George F. Smoot.* 480, L1 (1997)
- A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)
- Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)
- Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford.* 481, L35 (1997)
- Potential Measurement of the Luminosity Function of 158 Micron [C II] at High Redshifts: A Test of Galaxy Formation Models. *Antony A. Stark.* 481, 587 (1997)
- An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk. *Michael N. Fanelli, William W. Waller, Denise A. Smith, Wendy L. Freedman, Barry Madore, Susan G. Neff, Robert W. O'Connell, Morton S. Roberts, Ralph Bohlin, Andrew M. Smith, & Theodore P. Stecher.* 481, 735 (1997)
- Using Near-Infrared [Fe II] Lines to Identify Active Galaxies. *Almudena Alonso-Herrero, M. J. Rieke, G. H. Rieke, & M. Ruiz.* 482, 747 (1997)
- The Fueling of Nuclear Activity: The Bar Properties of Seyfert and Normal Galaxies. *John S. Mulchaey & Michael W. Regan.* 482, L135 (1997)
- INFRARED: ISM: CONTINUUM**
- A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall.* 480, 173 (1997)
- Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin.* 481, 420 (1997)
- Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens.* 482, 897 (1997)
- INFRARED: ISM: LINES AND BANDS**
- Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer.* 480, L133 (1997)
- The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C⁺ and O⁰. *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)
- Charge Transfer between Neutral Atoms and Highly Ionized Species: Implications for ISO Observations. *G. J. Ferland, K. T. Korista, D. A. Verner, & A. Dalgarno.* 481, L115 (1997)
- Near-Infrared H₂ and Associated O⁰ and C⁺ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch.* 482, 298 (1997)
- INFRARED: STARS**
- Optical/Near-Infrared Observations of GRO J1744-28. *D. M. Cole, D. E. Vanden Berk, S. A. Sevrerson, M. C. Miller, J. M. Quashnock, R. C. Nichol, D. Q. Lamb, K. Hurley, P. Blanco, C. Lidman, & K. Glazebrook.* 480, 377 (1997)
- Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji.* 480, L39 (1997)
- A Comparison of the Near-Infrared and Visible Spectra of Three Bright Cepheids. *R. Paul Butler & Roger A. Bell.* 480, 767 (1997)
- S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest.* 481, 327 (1997)

- The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck.* 481, 378 (1997)
- A Search for Close Bright Companions to AeBe Stars. *N. Pirzkal, E. J. Spillar, & H. M. Dyck.* 481, 392 (1997)
- Near-Infrared Emission of Protostars. *Nuria Calvet, Lee Hartmann, & Stephen E. Strom.* 481, 912 (1997)
- On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)
- Spectral Analysis Using the Wavelet Transform. *Jean-Luc Starck, Ralf Siebenmorgen, & Roland Gredel.* 482, 1011 (1997)

INSTABILITIES

- Numerical Modeling of Tidal Effects in Polytropic Accretion Disks. *Patrick Godon.* 480, 329 (1997)
- Dynamical Effects of the Parker Instability in the Interstellar Medium. *Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou.* 480, L55 (1997)
- Langmuir Wave Generation through a Neutrino Beam Instability. *S. J. Hardy & D. B. Melrose.* 480, 705 (1997)
- Radiative Transfer Effects on the Stability of Sound Waves in a Polytropic Atmosphere. *James MacDonald & Dermott Mullan.* 481, 963 (1997)
- The Nature of the Fluctuations Preceding the Giant Bursts in the Bursting Pulsar GRO J1744-28. *John K. Cannizzo.* 482, 178 (1997)
- The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank.* 482, 230 (1997)
- Simulation of the Kelvin-Helmholtz Instability in the Magnetized Slab Jet. *K. W. Min.* 482, 733 (1997)
- Kelvin-Helmholtz and Thermal-Dynamic Instabilities with Self-Gravity: A New Gravitational Interface Instability. *James H. Hunter, Jr., Rodney W. Whitaker, & Richard V. E. Lovelace.* 482, 852 (1997)
- Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter.* 482, 919 (1997)

INSTRUMENTATION: DETECTORS

- Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV. *S. W. Barwick, J. J. Beatty, A. Bhattacharyya, C. R. Bower, C. J. Chaput, S. Coutu, G. A. de Nolfo, J. Knapp, D. M. Lowder, S. McKee, D. Müller, J. A. Musser, S. L. Nutter, E. Schneider, S. P. Swordy, G. Tarlé, A. D. Tomasch, & E. Torbet (The HEAT Collaboration).* 482, L191 (1997)

INSTRUMENTATION: MISCELLANEOUS

- GRAPE-4: A Massively Parallel Special-Purpose Computer for Collisional N-Body Simulations. *Junichiro Makino, Makoto Taiji, Toshikazu Ebisuzaki, & Daichiro Sugimoto.* 480, 432 (1997)

INSTRUMENTATION: SPECTROGRAPHS

- Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss.* 482, 546 (1997)

INTERPLANETARY MEDIUM

- The Neutral Hydrogen Abundance and Ionization in the Inner Heliosphere. *O. Puyoo, L. Ben Jaffel, & C. Emerich.* 480, 262 (1997)
- Effects of Solar Modulation on the Low-Energy Cosmic-Ray Antiproton/Proton Ratio. *A. W. Labrador & R. A. Mewaldt.* 480, 371 (1997)
- The Physics of Dust Coagulation and the Structure of Dust Aggregates in Space. *C. Dominik & A. G. M. Tielens.* 480, 647 (1997)
- Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. *K. R. Flammer, D. A. Mendis, & V. D. Shapiro.* 482, 1021 (1997)
- Cosmic-Ray Modulation Parameters Derived from the Solar Diurnal Variation. *D. L. Hall, M. L. Duldig, & J. E. Humble.* 482, 1038 (1997)

INTERSTELLAR: MOLECULES

- First Astronomical Detection of the Cumulene Carbon Chain Molecule H₂C₆ in TMC-1. *W. D. Langer, T. Velusamy, T. B. H. Kuiper, R. Peng, M. C. McCarthy, M. J. Travers, A. Kovács, C. A. Gottlieb, & P. Thaddeus.* 480, L63 (1997)

ISM: ABUNDANCES

- A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall.* 480, 173 (1997)
- High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp.* 480, 216 (1997)
- The Neutral Hydrogen Abundance and Ionization in the Inner Heliosphere. *O. Puyoo, L. Ben Jaffel, & C. Emerich.* 480, 262 (1997)
- Abundances and Depletions toward the Orion Nebula. *R. Young Shuping & Theodore P. Snow.* 480, 272 (1997)
- A New Generation of Photoionization Codes: Three-dimensional Models. The Bipolar Planetary Nebula IC 4406. *R. Gruenwald, S. M. Viegas, & D. Broguère.* 480, 283 (1997)
- Full Synthesis Observations of CH₃CH₂CN in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder.* 480, L67 (1997)
- Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas.* 480, L71 (1997)
- Galactic Cosmic-Ray Manganese: Ulysses High-Energy Telescope Results. *M. A. DuVernois.* 481, 241 (1997)
- The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C⁺ and O⁺. *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)
- The Amount of CH Produced during CH⁺ Synthesis in Interstellar Clouds. *S. R. Federman, D. E. Welty, & Jason A. Cardelli.* 481, 795 (1997)
- New Observations of the [HCO⁺]/[HOC⁺] Ratio in Dense Molecular Clouds. *A. J. Apponi & L. M. Ziurys.* 481, 800 (1997)
- Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell.* 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb.* 482, 267 (1997)
- The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. *Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer.* 482, 285 (1997)
- SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas.* 482, L45 (1997)
- Carbon in the Diffuse Interstellar Medium. *Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer.* 482, L105 (1997)
- An Investigation into Sulfur Isotopes in the Galactic Cosmic Rays. *M. R. Thayer.* 482, 792 (1997)
- Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV. *S. W. Barwick, J. J. Beatty, A. Bhattacharyya, C. R. Bower, C. J. Chaput, S. Coutu, G. A. de Nolfo, J. Knapp, D. M. Lowder, S. McKee, D. Müller, J. A. Musser, S. L. Nutter, E. Schneider, S. P. Swordy, G. Tarlé, A. D. Tomasch, & E. Torbet (The HEAT Collaboration).* 482, L191 (1997)
- The Abundance of Mg in the Interstellar Medium. *Edward L. Fitzpatrick.* 482, L199 (1997)
- Deuterated Methanol in the Orion Compact Ridge. *S. B. Charnley, A. G. G. M. Tielens, & S. D. Rodgers.* 482, L203 (1997)

ISM: ATOMS

- First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)

ISM: CLOUDS

- High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. *Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp.* 480, 216 (1997)
- Dynamical Effects of the Parker Instability in the Interstellar Medium. *Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou.* 480, L55 (1997)

- Full Synthesis Observations of $\text{CH}_3\text{CH}_2\text{CN}$ in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder*. 480, L67 (1997)
- Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas*. 480, L71 (1997)
- The Physics of Dust Coagulation and the Structure of Dust Aggregates in Space. *C. Dominik & A. G. M. Tielens*. 480, 647 (1997)
- Cloud/Intercloud Structure from Nonlinear Magnetic Waves. *Bruce G. Elmegreen*. 480, 674 (1997)
- A Production Mechanism for Clusters of Dense Cores. *Shu-ichiro Inutsuka & Shoken M. Miyama*. 480, 681 (1997)
- Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya*. 480, 694 (1997)
- Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. *Fumitaka Nakamura & Tomoyuki Hanawa*. 480, 701 (1997)
- Tiny-Scale Atomic Structure and the Cold Neutral Medium. *Carl Heiles*. 481, 193 (1997)
- The Molecular Cloud near the Hard X-Ray Source 1E 1740.7–2942. *Min Yan & A. Dalgarno*. 481, 296 (1997)
- Extensive High-Resolution ^{12}CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato*. 481, 302 (1997)
- The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C^+ and O^0 . *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey*. 481, 343 (1997)
- New Observations of the $[\text{HCO}^+]/[\text{HOC}^+]$ Ratio in Dense Molecular Clouds. *A. J. Apponi & L. M. Ziurys*. 481, 800 (1997)
- Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. *K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff*. 481, 866 (1997)
- Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams*. 482, 182 (1997)
- Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell*. 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb*. 482, 267 (1997)
- The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. *Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer*. 482, 285 (1997)
- Near-Infrared H_2 and Associated O^0 and C^+ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch*. 482, 298 (1997)
- Kinematics of the Ursa Major Molecular Clouds. *Marc W. Pound & Alyssa A. Goodman*. 482, 334 (1997)
- Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. *Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach*. 482, L41 (1997)
- SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas*. 482, L45 (1997)
- The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. *Richard P. Nelson & William D. Langer*. 482, 796 (1997)
- Kelvin-Helmholtz and Thermal-Dynamic Instabilities with Self-Gravity: A New Gravitational Interface Instability. *James H. Hunter, Jr., Rodney W. Whitaker, & Richard V. E. Lovelace*. 482, 852 (1997)
- Luminescence from Hydrogenated Amorphous Carbon and Extended Red Emission from Nebulae. *W. W. Duley, S. Seahra, & D. A. Williams*. 482, 866 (1997)
- The Abundance of Mg in the Interstellar Medium. *Edward L. Fitzpatrick*. 482, L199 (1997)
- Deuterated Methanol in the Orion Compact Ridge. *S. B. Chamley, A. G. G. M. Tielens, & S. D. Rodgers*. 482, L203 (1997)
- ### ISM: COSMIC RAYS
- Effects of Solar Modulation on the Low-Energy Cosmic-Ray Antiproton/Proton Ratio. *A. W. Labrador & R. A. Mewaldt*. 480, 371 (1997)
- EGRET Observations of the Diffuse Gamma-Ray Emission from the Galactic Plane. *S. D. Hunter, D. L. Bertsch, J. R. Catelli, T. M. Dame, S. W. Digel, B. L. Dingus, J. A. Esposito, C. E. Fichtel, R. C. Hartman, G. Kanbach, D. A. Kniffen, Y. C. Lin, H. A. Mayer-Hasselwander, P. F. Michelson, C. von Montigny, R. Mukherjee, P. L. Nolan, E. Schneid, P. Sreekumar, P. Thaddeus, & D. J. Thompson*. 481, 205 (1997)
- Galactic Cosmic-Ray Manganese: *Ulysses* High-Energy Telescope Results. *M. A. DuVernois*. 481, 241 (1997)
- The Density Spike in Cosmic-Ray-modified Shocks: Formation, Evolution, and Instability. *Byung-Il Jun & T. W. Jones*. 481, 253 (1997)
- Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussolletti, & G. Strazzulla*. 481, 545 (1997)
- Stochastic Acceleration of Low-Energy Electrons in Cold Plasmas. *Julia M. Pryadko & Váhé Petrosian*. 482, 774 (1997)
- An Investigation into Sulfur Isotopes in the Galactic Cosmic Rays. *M. R. Thayer*. 482, 792 (1997)
- Cosmic-Ray Modulation Parameters Derived from the Solar Diurnal Variation. *D. L. Hall, M. L. Duldig, & J. E. Humble*. 482, 1038 (1997)
- Antihelium in Cosmic Rays: A New Upper Limit and Its Significance. *J. F. Ormes, A. A. Moiseev, T. Saeki, K. Anraku, S. Orto, R. L. Golden, M. Imori, S. Inaba, B. L. Kimbell, N. Kimura, Y. Makida, H. Matsumoto, H. Matsunaga, J. W. Mitchell, M. Motoki, J. Nishimura, M. Nozaki, R. E. Streitmatter, J. Suzuki, K. Tanaka, I. Ueda, N. Yajima, T. Yamagami, A. Yamamoto, T. Yoshida, & K. Yoshimura (BESS Collaboration)*. 482, L187 (1997)
- Measurements of the Cosmic-Ray Positron Fraction from 1 to 50 GeV. *S. W. Barwick, J. J. Beatty, A. Bhattacharyya, C. R. Bower, C. J. Chaput, S. Coutu, G. A. de Nolfo, J. Knapp, D. M. Lowder, S. McKee, D. Müller, J. A. Musser, S. L. Nutter, E. Schneider, S. P. Swordy, G. Tarlé, A. D. Tomasch, & E. Torbet (The HEAT Collaboration)*. 482, L191 (1997)
- ### ISM: DUST, EXTINCTION
- A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall*. 480, 173 (1997)
- Radiative Torques on Interstellar Grains. II. Grain Alignment. *B. T. Draine & Joseph C. Weingartner*. 480, 633 (1997)
- The Physics of Dust Coagulation and the Structure of Dust Aggregates in Space. *C. Dominik & A. G. M. Tielens*. 480, 647 (1997)
- S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest*. 481, 327 (1997)
- Sulfuretted Molecules in Hot Cores. *S. B. Charnley*. 481, 396 (1997)
- Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin*. 481, 420 (1997)
- Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussolletti, & G. Strazzulla*. 481, 545 (1997)
- Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen*. 481, 809 (1997)
- Carbon in the Diffuse Interstellar Medium. *Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer*. 482, L105 (1997)
- Luminescence from Hydrogenated Amorphous Carbon and Extended Red Emission from Nebulae. *W. W. Duley, S. Seahra, & D. A. Williams*. 482, 866 (1997)
- The Abundance of Mg in the Interstellar Medium. *Edward L. Fitzpatrick*. 482, L199 (1997)
- ### ISM: GENERAL
- Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya*. 480, 694 (1997)
- Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. *Marco Spaans & C. Marcello Carollo*. 482, L93 (1997)

ISM: GLOBULES

The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. *Richard P. Nelson & William D. Langer.* 482, 796 (1997)

ISM: H II REGIONS

S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest.* 481, 327 (1997)

Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)

Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss.* 482, 307 (1997)

A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner.* 482, 355 (1997)

Spatial Resolution of the R Aquarii Binary System. *J. M. Hollis, J. A. Pedely, & R. G. Lyon.* 482, L85 (1997)

The Ionized Gas in the Aftermath of a Starburst: The Case of NGC 1569. *Daniel Devost, Jean-René Roy, & Laurent Drissen.* 482, 765 (1997)

ISM: INDIVIDUAL**Messier Number: M17**

A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb.* 482, 267 (1997)

Name: Cepheus A

An Evolving Radio Source in the Young Star-forming Region Cepheus A. *V.A. Hughes.* 481, 857 (1997)

A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb.* 482, 267 (1997)

Name: Crab Nebula

A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar. *A. Borione, M. A. Catanese, M. C. Chantell, C. E. Covault, J. W. Cronin, B. E. Fick, L. F. Fortson, J. F. Fowler, K. G. Gibbs, M. A. K. Glasmacher, K. D. Green, D. B. Kieda, J. Matthews, B. J. Newport, D. F. Nitz, R. A. Ong, L. J. Rosenberg, D. Sinclair, & J. C. van der Velde.* 481, 313 (1997)

Name: 30 Doradus

First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)

Name: Orion

Near-Infrared H₂ and Associated O⁰ and C⁺ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch.* 482, 298 (1997)

Name: Orion Nebula

Abundances and Depletions toward the Orion Nebula. *R. Young Shuping & Theodore P. Snow.* 480, 272 (1997)

Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell.* 482, 245 (1997)

Name: Sagittarius B2

Full Synthesis Observations of CH₃CH₂CN in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder.* 480, L67 (1997)

Name: Sagittarius B2(LMH)

Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas.* 480, L71 (1997)

Name: Ursa Major

Kinematics of the Ursa Major Molecular Clouds. *Marc W. Pound & Alyssa A. Goodman.* 482, 334 (1997)

Name: Vela Supernova Remnant

ROSAT PSPC Observation of the Northeast Region of the Vela Supernova Remnant. II. Spectral Analysis with a Nonequilibrium Ionization Emission Model. *F. Bocchino, A. Maggio, & S. Sciortino.* 481, 872 (1997)

The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)

Alphanumeric: DEM L316

Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)

Alphanumeric: G10.0-0.3

The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806-20. *D. A. Frail, G. Vasisht, & S. R. Kulkarni.* 480, L129 (1997)

Alphanumeric: HH 7-11

Is SVS 13 the Exciting Source of the HH 7-11 Flow? *Luis F. Rodríguez, Guillem Anglada, & Salvador Curiel.* 480, L125 (1997)

Alphanumeric: HH 111

Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker.* 482, L195 (1997)

Alphanumeric: IC 59

Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer.* 480, L133 (1997)

Alphanumeric: IC 63

Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer.* 480, L133 (1997)

Alphanumeric: L1641

Extensive High-Resolution ¹²CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato.* 481, 302 (1997)

Alphanumeric: N159

First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo.* 480, L59 (1997)

Alphanumeric: OMC-1

The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C⁺ and O⁰. *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)

Alphanumeric: OMC-2

The Orion Molecular Clouds OMC-1 and OMC-2 Mapped in the Far-Infrared Fine-Structure Line Emission of C⁺ and O⁰. *F. Herrmann, S. C. Madden, T. Nikola, A. Poglitsch, R. Timmermann, N. Geis, C. H. Townes, & G. J. Stacey.* 481, 343 (1997)

Alphanumeric: ON2

A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner.* 482, 355 (1997)

Alphanumeric: S255-2

S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest.* 481, 327 (1997)

Alphanumeric: VRO 42.05.01

ASCA Observations of the Supernova Remnant VRO 42.05.01. *Zhiyu Guo & David N. Burrows.* 480, L51 (1997)

Alphanumeric: W44

A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis.* 482, 874 (1997)

Alphanumeric: W49A

Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss.* 482, 307 (1997)

ISM: JETS AND OUTFLOWS

- The ASCA Spectrum of the Vela Pulsar Jet. *Craig B. Markwardt & Hakki B. Ogelman*. 480, L13 (1997)
- Is SVS 13 the Exciting Source of the HH 7-11 Flow? *Luis F. Rodríguez, Guillem Anglada, & Salvador Curiel*. 480, L125 (1997)
- Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin*. 481, 420 (1997)
- Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri. *John E. Krist, Christopher J. Burrows, Karl R. Stapelfeldt, Gilda E. Ballester, John T. Clarke, David Crisp, Robin W. Evans, John S. Gallagher III, Richard E. Griffiths, J. Jeff Hester, Jon A. Holtzman, John G. Hoessel, Jeremy R. Mould, Paul A. Scowen, John T. Trauger, Alan M. Watson, & James A. Westphal*. 481, 447 (1997)
- Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato*. 481, 936 (1997)
- A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner*. 482, 355 (1997)
- Collimation of Astrophysical Jets: The Proto-Planetary Nebula He 3-1475. *Kazimierz J. Borkowski, John M. Blondin, & J. Patrick Harrington*. 482, L97 (1997)
- Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. *M. M. Romanova, G. V. Ustyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace*. 482, 708 (1997)
- Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker*. 482, L195 (1997)

ISM: KINEMATICS AND DYNAMICS

- Full Synthesis Observations of $\text{CH}_3\text{CH}_2\text{CN}$ in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder*. 480, L67 (1997)
- Cloud/Intercloud Structure from Nonlinear Magnetic Waves. *Bruce G. Elmegreen*. 480, 674 (1997)
- High-Velocity Rain: The Terminal Velocity Model of Galactic Infall. *Robert A. Benjamin & Laura Danly*. 481, 764 (1997)
- Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin*. 481, 838 (1997)
- Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss*. 482, 307 (1997)
- Kinematics of the Ursa Major Molecular Clouds. *Marc W. Pound & Alyssa A. Goodman*. 482, 334 (1997)

ISM: MAGNETIC FIELDS

- Submillimeter Polarimetry of Class 0 Protostars: Constraints on Magnetized Outflow Models. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson*. 480, 255 (1997)
- Dynamical Effects of the Parker Instability in the Interstellar Medium. *Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou*. 480, L55 (1997)
- The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kulsrud, Renyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu*. 480, 481 (1997)
- Cloud/Intercloud Structure from Nonlinear Magnetic Waves. *Bruce G. Elmegreen*. 480, 674 (1997)
- Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. *Fumitaka Nakamura & Tomoyuki Hanawa*. 480, 701 (1997)
- Faraday Depolarization and Circumstellar SiO Masers. *Bradley K. Wallin & William D. Watson*. 481, 832 (1997)
- The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. *Benjamin D. G. Chandran*. 482, 156 (1997)

ISM: MOLECULES

- A Three-dimensional Decomposition of the Infrared Emission from Dust in the Milky Way. *T. J. Sodroski, N. Odegard, R. G. Arendt, E. Dwek, J. L. Weiland, M. G. Hauser, & T. Kelsall*. 480, 173 (1997)
- Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia*. 480, 420 (1997)

- Full Synthesis Observations of $\text{CH}_3\text{CH}_2\text{CN}$ in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder*. 480, L67 (1997)
- Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas*. 480, L71 (1997)
- Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H_2 . *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer*. 480, L133 (1997)
- An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. *Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa*. 481, 263 (1997)
- Infrared Response of H_2 to X-Rays in Dense Clouds. *S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno*. 481, 282 (1997)
- The Molecular Cloud near the Hard X-Ray Source 1E 1740.7–2942. *Min Yan & A. Dalgarno*. 481, 296 (1997)
- Extensive High-Resolution ^{12}CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato*. 481, 302 (1997)
- The Emission Continuum of Electron-excited Molecular Hydrogen. *H. Abgrall, E. Roueff, Xianming Liu, & D. E. Shemansky*. 481, 557 (1997)
- Molecular Gas in the Spectacular Ring Galaxy NGC 1144. *Yu Gao, P. M. Solomon, D. Downes, & S. J. E. Radford*. 481, L35 (1997)
- The Amount of CH Produced during CH^+ Synthesis in Interstellar Clouds. *S. R. Federman, D. E. Welty, & Jason A. Cardelli*. 481, 795 (1997)
- New Observations of the $[\text{HCO}^+]/[\text{HOC}^+]$ Ratio in Dense Molecular Clouds. *A. J. Apponi & L. M. Ziurys*. 481, 800 (1997)
- Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell*. 482, 245 (1997)
- A Survey of the Chemical Properties of the M17 and Cepheus A Cloud Cores. *Edwin A. Bergin, Hans Ungerechts, Paul F. Goldsmith, Ronald L. Snell, William M. Irvine, & F. Peter Schloerb*. 482, 267 (1997)
- The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. *Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer*. 482, 285 (1997)
- Near-Infrared H_2 and Associated O^0 and C^+ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Herrmann, & A. Poglitsch*. 482, 298 (1997)
- A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner*. 482, 355 (1997)
- SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas*. 482, L45 (1997)
- Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker*. 482, L195 (1997)
- Deuterated Methanol in the Orion Compact Ridge. *S. B. Charnley, A. G. G. M. Tielens, & S. D. Rodgers*. 482, L203 (1997)
- Laboratory Detection and Submillimeter Spectrum of NaCCH ($X^1\Sigma$). *B. Z. Li & L. M. Ziurys*. 482, L215 (1997)

ISM: PLANETARY NEBULAE: GENERAL

- Hot Evolved Objects in Different Parent Galaxies: The Stellar Winds of Three Planetary Nebula Nuclei in the Large Magellanic Cloud. *Luciana Bianchi, Emanuel Vassiliadis, & Michael Dopita*. 480, 290 (1997)
- Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya*. 480, 694 (1997)

ISM: PLANETARY NEBULAE: INDIVIDUAL

- NGC Number: NGC 1535
- Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H_2 . *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer*. 480, L133 (1997)
- NGC Number: NGC 7293
- Neutral Atomic Carbon in the Globules of the Helix. *K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller*. 482, L101 (1997)

Alphanumeric: A30

High-Resolution X-Ray Image of the Hydrogen-deficient Planetary Nebula Abell 30. *You-Hua Chu, Thomas H. Chang, & Gail M. Conway.* 482, 891 (1997)

Alphanumeric: He 3-1475

Collimation of Astrophysical Jets: The Proto-Planetary Nebula He 3-1475. *Kazimierz J. Borkowski, John M. Blondin, & J. Patrick Harrington.* 482, L97 (1997)

Alphanumeric: IC 4406

A New Generation of Photoionization Codes: Three-dimensional Models. The Bipolar Planetary Nebula IC 4406. *R. Gruenwald, S. M. Viegas, & D. Broguère.* 480, 283 (1997)

ISM: REFLECTION NEBULAE

Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H₂. *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer.* 480, L133 (1997)

Luminescence from Hydrogenated Amorphous Carbon and Extended Red Emission from Nebulae. *W. W. Duley, S. Seahra, & D. A. Williams.* 482, 866 (1997)

ISM: STRUCTURE

Dynamical Effects of the Parker Instability in the Interstellar Medium. *Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou.* 480, L55 (1997)

Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)

Tiny-Scale Atomic Structure and the Cold Neutral Medium. *Carl Heiles.* 481, 193 (1997)

An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. *Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa.* 481, 263 (1997)

Extensive High-Resolution ¹²CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato.* 481, 302 (1997)

ROSAT PSPC Observation of the Northeast Region of the Vela Supernova Remnant. II. Spectral Analysis with a Nonequilibrium of Ionization Emission Model. *F. Bocchino, A. Maggio, & S. Sciortino.* 481, 872 (1997)

Chemical and Physical Gradients along the OMC-1 Ridge. *Hans Ungerechts, Edwin A. Bergin, Paul F. Goldsmith, William M. Irvine, F. Peter Schloerb, & Ron L. Snell.* 482, 245 (1997)

The Chemical Composition and Evolution of Giant Molecular Cloud Cores: A Comparison of Observation and Theory. *Edwin A. Bergin, Paul F. Goldsmith, Ronald L. Snell, & William D. Langer.* 482, 285 (1997)

SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas.* 482, L45 (1997)

ISM: SUPERNOVA REMNANTS

A Radio Survey for Pulsar Wind Nebulae. *D. A. Frail & B. R. Scharringhausen.* 480, 364 (1997)

The ASCA Spectrum of the Vela Pulsar Jet. *Craig B. Markwardt & Hakki B. Ögelman.* 480, L13 (1997)

ASCA Observations of the Supernova Remnant VRO 42.05.01. *Zhiyu Guo & David N. Burrows.* 480, L51 (1997)

Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. *Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-A. Nyman.* 480, 607 (1997)

Supernova Remnants in the Magellanic Clouds. I. The Colliding Remnants DEM L316. *Rosa Murphy Williams, You-Hua Chu, John R. Dickel, Ross Beyer, Robert Petre, R. Chris Smith, & Douglas K. Milne.* 480, 618 (1997)

The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806-20. *D. A. Frail, G. Vasisht, & S. R. Kulkarni.* 480, L129 (1997)

Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin.* 481, 838 (1997)

ROSAT PSPC Observation of the Northeast Region of the Vela Supernova Remnant. II. Spectral Analysis with a Nonequilibrium of

Ionization Emission Model. *F. Bocchino, A. Maggio, & S. Sciortino.* 481, 872 (1997)

A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis.* 482, 874 (1997)

The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)

LINE: FORMATION

Excitation Mechanism of Molecular Hydrogen Emission in NGC 6240. *H. Sugai, M. A. Malkan, M. J. Ward, R. I. Davies, & I. S. McLean.* 481, 186 (1997)

Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)

Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. *Adam Fisher, David Branch, Peter Nugent, & E. Baron.* 481, L89 (1997)

The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. *A. S. Wilson, L. Binette, & T. Storchi-Bergmann.* 482, L131 (1997)

LINE: IDENTIFICATION

Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia.* 480, 420 (1997)

First Astronomical Detection of the Cumulene Carbon Chain Molecule H₂C₆ in TMC-1. *W. D. Langer, T. Velusamy, T. B. H. Kuiper, R. Peng, M. C. McCarthy, M. J. Travers, A. Kovács, C. A. Goutlieb, & P. Thaddeus.* 480, L63 (1997)

Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn.* 480, 784 (1997)

Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. *Adam Fisher, David Branch, Peter Nugent, & E. Baron.* 481, L89 (1997)

Laboratory Detection and Submillimeter Spectrum of NaCCH ($X^1\Sigma$). *B. Z. Li & L. M. Ziurys.* 482, L215 (1997)

LINE: PROFILES

A Comparison of the Near-Infrared and Visible Spectra of Three Bright Cepheids. *R. Paul Butler & Roger A. Bell.* 480, 767 (1997)

Multiperiodicity of ζ Ophiuchi from Multisite Observations. *E. Kambe, R. Hirata, H. Ando, J. Cuypers, M. Katoh, E. J. Kennelly, G. A. H. Walker, S. Štefl, & A. E. Tarasov.* 481, 406 (1997)

Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)

Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. *K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff.* 481, 866 (1997)

Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. *Adam Fisher, David Branch, Peter Nugent, & E. Baron.* 481, L89 (1997)

Lyman-Alpha Absorption Lines from Minipancakes. *Biman B. Nath.* 482, 621 (1997)

On the Line Profile Variations and Nonradial Pulsation Modes of ζ Tauri (HD 37202). *Anthony B. Kaye & Douglas R. Gies.* 482, 1028 (1997)

Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk.* 482, 1065 (1997)

MAGNETIC FIELDS

The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806-20. *D. A. Frail, G. Vasisht, & S. R. Kulkarni.* 480, L129 (1997)

Formation of Millisecond Pulsars from Accretion-induced Collapse and Constraints on Pulsar Gamma-Ray Burst Models. *Insu Yi & Eric G. Blackman.* 482, 383 (1997)

Poynting Jets from Black Holes and Cosmological Gamma-Ray Bursts. *P. Mészáros & M. J. Rees.* 482, L29 (1997)

Antihelium in Cosmic Rays: A New Upper Limit and Its Significance. *J. F. Ormes, A. A. Moiseev, T. Sacki, K. Anraku, S. Orito, R. L. Golden, M. Imori, S. Inaba, B. L. Kimbell, N. Kimura, Y. Makida,*

H. Matsumoto, H. Matsunaga, J. W. Mitchell, M. Motoki, J. Nishimura, M. Nozaki, R. E. Streitmatter, J. Suzuki, K. Tanaka, I. Ueda, N. Yajima, T. Yamagami, A. Yamamoto, T. Yoshida, & K. Yoshimura (BESS Collaboration). 482, L187 (1997)

MAGNETOHYDRODYNAMICS: MHD

Dynamical Effects of the Parker Instability in the Interstellar Medium. Shantanu Basu, Telemachos Ch. Mouschovias, & Efthimios V. Paleologou. 480, L55 (1997)

The Protogalactic Origin for Cosmic Magnetic Fields. Russell M. Kulsrud, Renyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu. 480, 481 (1997)

The Linear Response of a Magnetic Flux Tube to Buffeting by External p -Modes. I. S. S. Hasan. 480, 803 (1997)

The Emergence of Magnetic Flux Loops in Sunlike Stars. Edward E. DeLuca, Yuhong Fan, & Steven H. Saar. 481, 369 (1997)

Nonclassical Theory of Turbulent Collisionless Plasmas. L. L. Williams. 481, 515 (1997)

Interactions of Convecting Magnetic Loops and Arcades. Masao Ozaki, Tetsuya Sato, T. Hayashi, R. Horiuchi, K. Watanabe, Y. Todo, A. Kageyama, T. H. Watanabe, & H. Taramaru. 481, 524 (1997)

Shear Wave Dissipation in Planar Magnetic X-Points. I. J. D. Craig & A. N. McClymont. 481, 996 (1997)

Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. Naoki Itoh, Akinori Nishikawa, Yasuhiro Kohyama, & Satoshi Nozawa. 482, 33 (1997)

The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. Benjamin D. G. Chandran. 482, 156 (1997)

The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank. 482, 230 (1997)

What Is the Spatial Relationship between Hard X-Ray Footpoints and Vertical Electric Currents in Solar Flares? Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi. 482, 490 (1997)

Formation of Stationary Magnetohydrodynamic Outflows from a Disk by Time-dependent Simulations. M. M. Romanova, G. V. Ustyugova, A. V. Koldoba, V. M. Chechetkin, & R. V. E. Lovelace. 482, 708 (1997)

Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. Rachid Ouyed & Ralph E. Pudritz. 482, 712 (1997)

Simulation of the Kelvin-Helmholtz Instability in the Magnetized Slab Jet. K. W. Min. 482, 733 (1997)

Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. K. R. Flammer, D. A. Mendis, & V. D. Shapiro. 482, 1021 (1997)

MASERS

The Distribution of H₂O Maser Emission in the Nucleus of NGC 4945. L. J. Greenhill, J. M. Moran, & J. R. Herrnstein. 481, L23 (1997)

Faraday Depolarization and Circumstellar SiO Masers. Bradley K. Wallin & William D. Watson. 481, 832 (1997)

Imaging the Magnetic Field in the Atmosphere of TX Camelopardalis. A. J. Kemball & P. J. Diamond. 481, L111 (1997)

Spatial Resolution of the R Aquarii Binary System. J. M. Hollis, J. A. Pedely, & R. G. Lyon. 482, L85 (1997)

METHODS: ANALYTICAL

Capture of Field Stars by Globular Clusters in Dense Bulge Regions. Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbay. 482, L49 (1997)

METHODS: DATA ANALYSIS

Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? Max Tegmark, Andy N. Taylor, & Alan F. Heavens. 480, 22 (1997)

How to Make Maps from Cosmic Microwave Background Data without Losing Information. Max Tegmark. 480, L87 (1997)

Cumulant Correlators from the APM. István Szapudi & Alexander S. Szalay. 481, L1 (1997)

Measuring Polarization in the Cosmic Microwave Background. Uroš Seljak. 482, 6 (1997)

Galactic Microwave Emission at Degree Angular Scales. Angélica de Oliveira-Costa, A. Kogut, Mark J. Devlin, C. Barth Netterfield, Lyman A. Page, & Edward J. Wollack. 482, L17 (1997)

Detection of Zonal Shear Flows beneath the Sun's Surface from f -Mode Frequency Splitting. A. G. Kosovichev & J. Schou. 482, L207 (1997)

METHODS: LABORATORY

Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Ronudi, E. Bussolletti, & G. Strazzulla. 481, 545 (1997)

The Emission Continuum of Electron-excited Molecular Hydrogen. H. Abgrall, E. Roueff, Xianming Liu, & D. E. Shemansky. 481, 557 (1997)

High-Resolution Measurement of the K α Spectrum of Fe XXV–XXVIII: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs. 482, 1076 (1997)

METHODS: NUMERICAL

Galaxy Groups, CDM/CHDM Cosmologies, and the Value of Ω_0 . Richard Nolthenius, Anatoly A. Klypin, & Joel R. Primack. 480, 43 (1997)

An Adaptive Hierarchical Particle-Mesh Code with Isolated Boundary Conditions. Sergio Gelato, David F. Chernoff, & Ira Wasserman. 480, 115 (1997)

Numerical Modeling of Tidal Effects in Polytopic Accretion Disks. Patrick Godon. 480, 329 (1997)

Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. William P. Abbott, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein. 480, 395 (1997)

GRAPE-4: A Massively Parallel Special-Purpose Computer for Collisional N -Body Simulations. Junichiro Makino, Makoto Taiji, Toshikazu Ebisuzaki, & Daichiro Sugimoto. 480, 432 (1997)

The Protogalactic Origin for Cosmic Magnetic Fields. Russell M. Kulsrud, Renyue Cen, Jeremiah P. Ostriker, & Dongsu Ryu. 480, 481 (1997)

Baryons, Dark Matter, and the Jeans Mass in Simulations of Cosmological Structure Formation. J. Michael Owen & Jens V. Villumsen. 481, 1 (1997)

Merger Rate of Equal-Mass Spherical Galaxies. Junichiro Makino & Piet Hut. 481, 83 (1997)

Formation of Solar Calcium H and K Bright Grains. Mats Carlsson & Robert F. Stein. 481, 500 (1997)

Infall Regions of Galaxy Clusters. Antonaldo Diaferio & Margaret J. Geller. 481, 633 (1997)

The Power Spectrum of Microwave Background Temperature Anisotropies Measured by the Tenerife Experiment. F. Atrio-Barandela, S. Gottlöber, & J. P. Mückel. 482, 1 (1997)

Capture of Field Stars by Globular Clusters in Dense Bulge Regions. Eduardo Bica, Horacio Dottori, Irapuan Rodrigues de Oliveira Filho, Sergio Ortolani, & Beatriz Barbay. 482, L49 (1997)

Systematic Errors in the Hubble Constant Based upon Measurement of the Sunyaev-Zeldovich Effect. Kurt Roettiger, James M. Stone, & Richard F. Mushotzky. 482, 588 (1997)

The Quasar-Quasar Correlation Function in the Palomar Transit Grism Survey. Tomislav Kundić. 482, 631 (1997)

Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. Rachid Ouyed & Ralph E. Pudritz. 482, 712 (1997)

Simulation of the Kelvin-Helmholtz Instability in the Magnetized Slab Jet. K. W. Min. 482, 733 (1997)

Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros. 482, 942 (1997)

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Karhunen-Loève Eigenvalue Problems in Cosmology: How Should We Tackle Large Data Sets? Max Tegmark, Andy N. Taylor, & Alan F. Heavens. 480, 22 (1997)

Cumulant Correlators from the APM. István Szapudi & Alexander S. Szalay. 481, L1 (1997)

Harmonic Coupling of the Red Noise in X-Ray Pulsars. L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi. 481, 943 (1997)

Beyond Genus Statistics: A Unifying Approach to the Morphology of Cosmic Structure. Jens Schmalzing & Thomas Buchert. 482, L1 (1997)

Determining Cosmic Microwave Background Anisotropies in the Presence of Foregrounds. *Scott Dodelson*. 482, 577 (1997)

MOLECULAR DATA

Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia*. 480, 420 (1997)

Theoretical Study of the Spectroscopy of TiO. *Stephen R. Langhoff*. 481, 1007 (1997)

Laboratory Detection and Submillimeter Spectrum of NaCCH ($X^1\Sigma$). *B. Z. Li & L. M. Ziurys*. 482, L215 (1997)

MOLECULAR PROCESSES

Molecules at High Redshift: The Evolution of the Cool Phase of Protogalactic Disks. *Colin A. Norman & Marco Spaans*. 480, 145 (1997)

Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia*. 480, 420 (1997)

Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji*. 480, L39 (1997)

First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1. *W. D. Langer, T. Velusamy, T. B. H. Kuiper, R. Peng, M. C. McCarthy, M. J. Travers, A. Kovács, C. A. Gottlieb, & P. Thaddeus*. 480, L63 (1997)

O_2/O_3 Microatmospheres in the Surface of Ganymede. *R. E. Johnson & W. A. Jesser*. 480, L79 (1997)

Near-Infrared Spectra of IC 59/63 and NGC 1535: Comparing Infrared and Ultraviolet Observations of H_2 . *M. L. Luhman, K. L. Luhman, T. Benedict, D. T. Jaffe, & J. Fischer*. 480, L133 (1997)

Infrared Response of H_2 to X-Rays in Dense Clouds. *S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno*. 481, 282 (1997)

The Molecular Cloud near the Hard X-Ray Source 1E 1740.7–2942. *Min Yan & A. Dalgarno*. 481, 296 (1997)

Sulfuretted Molecules in Hot Cores. *S. B. Charnley*. 481, 396 (1997)

The Emission Continuum of Electron-excited Molecular Hydrogen. *H. Abgrall, E. Roueff, Xianming Liu, & D. E. Shemansky*. 481, 557 (1997)

The Amount of CH Produced during CH^+ Synthesis in Interstellar Clouds. *S. R. Federman, D. E. Welty, & Jason A. Cardelli*. 481, 795 (1997)

On the Rotational Population Distribution of C_2 in Comets. *K. S. Krishna Swamy*. 481, 1004 (1997)

Theoretical Study of the Spectroscopy of TiO. *Stephen R. Langhoff*. 481, 1007 (1997)

Near-Infrared H_2 and Associated O^0 and C^+ Emission from Dense Photon-dominated Regions. *M. L. Luhman, D. T. Jaffe, A. Sternberg, F. Hermann, & A. Poglisch*. 482, 298 (1997)

Star Formation and Metal Production as a Function of Redshift: The Role of the Multiphase ISM. *Marco Spaans & C. Marcello Carollo*. 482, L93 (1997)

The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. *Richard P. Nelson & William D. Langer*. 482, 796 (1997)

Deuterated Methanol in the Orion Compact Ridge. *S. B. Charnley, A. G. G. M. Tielens, & S. D. Rodgers*. 482, L203 (1997)

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The Thorium Chronometer in CS 22892–052: Estimates of the Age of the Galaxy. *John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris*. 480, 246 (1997)

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Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. *Russell W. Strickland & David N. Schramm*. 481, 571 (1997)

Enhancement of Nuclear Reaction Rates in Dense Stellar Matter: A Path-Integral Monte Carlo Simulation Study. *Shuji Ogata*. 481, 883 (1997)

Gamma-Ray Line Signals from ^{26}Al and ^{60}Fe in the Galaxies of the Local Group. *F. X. Timmes & S. E. Woosley*. 481, L81 (1997)

Contributions of the Plasmons to the Energy Density and Pressure in the Early Universe. *Naoki Itoh, Akinori Nishikawa, Yasuharu Kohyama, & Satoshi Nozawa*. 482, 33 (1997)

Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. *Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky*. 482, 442 (1997)

Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian*. 482, 951 (1997)

PLANETS AND SATELLITES: INDIVIDUAL

Europa

O_2/O_3 Microatmospheres in the Surface of Ganymede. *R. E. Johnson & W. A. Jesser*. 480, L79 (1997)

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O_2/O_3 Microatmospheres in the Surface of Ganymede. *R. E. Johnson & W. A. Jesser*. 480, L79 (1997)

PLASMAS

Langmuir Wave Generation through a Neutrino Beam Instability. *S. J. Hardy & D. B. Melrose*. 480, 705 (1997)

Nonclassical Theory of Turbulent Collisionless Plasmas. *L. L. Williams*. 481, 515 (1997)

Shear Wave Dissipation in Planar Magnetic X-Points. *I. J. D. Craig & A. N. McClymont*. 481, 996 (1997)

The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. *Benjamin D. G. Chandran*. 482, 156 (1997)

The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank*. 482, 230 (1997)

Stochastic Acceleration of Low-Energy Electrons in Cold Plasmas. *Julia M. Pryadko & Vahé Petrosian*. 482, 774 (1997)

High-Resolution Measurement of the $K\alpha$ Spectrum of Fe XXV–XVIII: New Spectral Diagnostics of Nonequilibrium Astrophysical Plasmas. *V. Decaux, P. Beiersdorfer, S. M. Kahn, & V. L. Jacobs*. 482, 1076 (1997)

POLARIZATION

Submillimeter Polarimetry of Class 0 Protostars: Constraints on Magnetized Outflow Models. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson*. 480, 255 (1997)

Radiative Torques on Interstellar Grains. II. Grain Alignment. *B. T. Draine & Joseph C. Weingartner*. 480, 633 (1997)

Cloud/Intercloud Structure from Nonlinear Magnetic Waves. *Bruce G. Elmegreen*. 480, 674 (1997)

Faraday Depolarization and Circumstellar SiO Masers. *Bradley K. Wallin & William D. Watson*. 481, 832 (1997)

Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato*. 481, 936 (1997)

Imaging the Magnetic Field in the Atmosphere of TX Camelopardalis. *A. J. Kemball & P. J. Diamond*. 481, L111 (1997)

Measuring Polarization in the Cosmic Microwave Background. *Uroš Seljak*. 482, 6 (1997)

Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk*. 482, 1065 (1997)

Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti*. 482, L183 (1997)

RADIATION MECHANISMS: NONTHERMAL

Energy Extraction from a Relativistic Accretion Disk by Reflection Effect. *P. Hadrava, G. Bao, & E. Østgaard*. 480, 324 (1997)

X-Ray Emission of Gamma-Ray Bursts. *M. Tavani*. 480, 351 (1997)

O_2/O_3 Microatmospheres in the Surface of Ganymede. *R. E. Johnson & W. A. Jesser*. 480, L79 (1997)

Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller*. 480, 596 (1997)

Temporal and Spectral Properties of Comptonized Radiation and Its Applications. *Demosthenes Kazanas, Xin-Min Hua, & Lev Titarchuk*. 480, 735 (1997)

Electron Densities in Solar Flare Loops, Chromospheric Evaporation Upflows, and Acceleration Sites. *Markus J. Aschwanden & Arnold O. Benz*. 480, 825 (1997)

Scorpius X-1: Hints of Periodic Variability at Radio Frequencies. *C. F. Bradshaw, B. J. Geldzahler, & E. B. Fomalont*. 481, 489 (1997)

An Evolving Radio Source in the Young Star-forming Region Cepheus A. *V. A. Hughes*. 481, 857 (1997)

Pair Production Absorption Troughs in Gamma-Ray Burst Spectra: A Potential Distance Discriminator. *Matthew G. Baring & Alice K. Harding*. 481, L85 (1997)

Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. *Matthew G. Baring & Alice K. Harding*. 482, 372 (1997)

Heating and Cooling of Hot Accretion Flows by Nonlocal Radiation. *Ann A. Esin*. 482, 400 (1997)

Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Martí, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi*. 482, L33 (1997)

Luminescence from Hydrogenated Amorphous Carbon and Extended Red Emission from Nebulae. *W. W. Duley, S. Seahra, & D. A. Williams*. 482, 866 (1997)

A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis*. 482, 874 (1997)

RADIATION MECHANISMS: THERMAL

Low-Mass Normal-Matter Atmospheres of Strange Stars and Their Radiation. *Vladimir V. Usov*. 481, L107 (1997)

Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk*. 482, L57 (1997)

RADIATIVE TRANSFER

A New Generation of Photoionization Codes: Three-dimensional Models. The Bipolar Planetary Nebula IC 4406. *R. Gruenwald, S. M. Viegas, & D. Brogière*. 480, 283 (1997)

X-Ray Ionization of Protoplanetary Disks. *A. E. Glassgold, J. Najita, & J. Igea*. 480, 344 (1997)

Models of the Spectral Energy Distributions of FU Orionis Stars. *N. J. J. Turner, P. Bodenheimer, & K. R. Bell*. 480, 754 (1997)

Effects of Non-LTE Radiative Loss and Partial Ionization on the Structure of the Transition Region. *J. Chae, H. S. Yun, & A. I. Poland*. 480, 817 (1997)

Infrared Response of H₂ to X-Rays in Dense Clouds. *S. Tiné, S. Lepp, R. Grede, & A. Dalgarno*. 481, 282 (1997)

The Molecular Cloud near the Hard X-Ray Source 1E 1740.7-2942. *Min Yan & A. Dalgarno*. 481, 296 (1997)

Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen*. 481, 809 (1997)

Heating and Cooling of Hot Accretion Flows by Nonlocal Radiation. *Ann A. Esin*. 482, 400 (1997)

The Role of Helium in the Outer Solar Atmosphere. *V. H. Hansteen, E. Leer, & T. E. Holzer*. 482, 498 (1997)

Coronal Heating and the Vertical Temperature Structure of the Quiet Corona. *M. S. Wheatland, P. A. Sturrock, & L. W. Acton*. 482, 510 (1997)

The Dynamics of Low-Mass Molecular Clouds in External Radiation Fields. *Richard P. Nelson & William D. Langer*. 482, 796 (1997)

Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk*. 482, 1065 (1997)

Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti*. 482, L183 (1997)

RADIO CONTINUUM: GALAXIES

Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. *S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller*. 480, 596 (1997)

Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. *W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mouskoff, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange*. 481, 35 (1997)

The Temperature of Extended Gas in Active Galaxies: Evidence for Matter-bounded Clouds. *A. S. Wilson, L. Binette, & T. Storchi-Bergmann*. 482, L131 (1997)

RADIO CONTINUUM: ISM

A Radio Survey for Pulsar Wind Nebulae. *D. A. Frail & B. R. Scharringhausen*. 480, 364 (1997)

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Submillimeter Polarimetry of Class 0 Protostars: Constraints on Magnetized Outflow Models. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson*. 480, 255 (1997)

Discovery of Four Isolated Millisecond Pulsars. *M. Bailes, S. Johnston, J. F. Bell, D. R. Lorimer, B. W. Stappers, R. N. Manchester, A. G. Lyne, L. Nicastro, N. D'Amico, & B. M. Gaensler*. 481, 386 (1997)

Scorpius X-1: Hints of Periodic Variability at Radio Frequencies. *C. F. Bradshaw, B. J. Geldzahler, & E. B. Fomalont*. 481, 489 (1997)

An Evolving Radio Source in the Young Star-forming Region Cepheus A. *V. A. Hughes*. 481, 857 (1997)

Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. *Claus Leitherer, Jessica M. Chapman, & Bärbel Koribalski*. 481, 898 (1997)

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The H I Companions of H II Galaxies and Low Surface Brightness Dwarf Galaxies. *Christopher L. Taylor*. 480, 524 (1997)

Potential Measurement of the Luminosity Function of 158 Micron [C II] at High Redshifts: A Test of Galaxy Formation Models. *Antony A. Stark*. 481, 587 (1997)

High-Density, Compact H II Regions in the Starburst Galaxies NGC 3628 and IC 694: High-Resolution VLA Observations of the H92 α Radio Recombination Line. *Jun-Hui Zhao, K. R. Anantharamaiah, W. M. Goss, & F. Viallefond*. 482, 186 (1997)

RADIO LINES: GENERAL

First Astronomical Detection of the Cumulene Carbon Chain Molecule H₂C₆ in TMC-1. *W. D. Langer, T. Velusamy, T. B. H. Kuiper, R. Peng, M. C. McCarthy, M. J. Travers, A. Kovács, C. A. Gottlieb, & P. Thaddeus*. 480, L63 (1997)

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Gauche Ethyl Alcohol: Laboratory Assignments and Interstellar Identification. *J. C. Pearson, K. V. L. N. Sastry, Eric Herbst, & Frank C. De Lucia*. 480, 420 (1997)

First Detection of 492 GHz [C I] Emission from the Large Magellanic Cloud. *Antony A. Stark, Alberto D. Bolatto, Richard A. Chamberlin, Adair P. Lane, T. M. Bania, James M. Jackson, & K.-Y. Lo*. 480, L59 (1997)

Detection and Confirmation of Interstellar Acetic Acid. *David M. Mehringer, Lewis E. Snyder, Yanti Miao, & Frank J. Lovas*. 480, L71 (1997)

Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. *Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-Å. Nyman*. 480, 607 (1997)

Extensive High-Resolution ¹²CO Imaging of L1641 in Orion. *Seiichi Sakamoto, Tetsuo Hasegawa, Masahiko Hayashi, Jun-Ichi Morino, & Kumiko Sato*. 481, 302 (1997)

New Observations of the [HCO⁺]/[HOC⁺] Ratio in Dense Molecular Clouds. *A. J. Apponi & L. M. Ziurys*. 481, 800 (1997)

Kinematics of the Ursa Major Molecular Clouds. *Marc W. Pound & Alyssa A. Goodman*. 482, 334 (1997)

SiO Emission from the Galactic Center Molecular Clouds. *J. Martín-Pintado, P. de Vicente, A. Fuente, & P. Planesas*. 482, L45 (1997)

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Neutral Atomic Carbon in the Globules of the Helix. *K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller*. 482, L101 (1997)

RELATIVITY

Einstein Radii from Binary-Source Lensing Events. *Cheongho Han & Andrew Gould*. 480, 196 (1997)

Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. *Philip Kaaret, Eric C. Ford, & Kaiyou Chen*. 480, L27 (1997)

A Stratified Framework for Scalar-Tensor Theories of Modified Dynamics. *R. H. Sanders*. 480, 492 (1997)

Jet Dynamics in Black Hole Fields: A Collimation Mechanism. *Fernando de Felice & Luca Carlotto*. 481, 116 (1997)

Outbursts in OJ 287: A New Test for the General Theory of Relativity. *Mauri J. Valtonen & Harry J. Lehto*. 481, L5 (1997)

Pair Production Absorption Troughs in Gamma-Ray Burst Spectra: A Potential Distance Discriminator. *Matthew G. Baring & Alice K. Harding*. 481, L85 (1997)

- Hydrodynamical Models of Superluminal Sources. *J. L. Gómez, J. M^a. Martí, A. P. Marscher, J. M^a. Ibáñez, & A. Alberdi.* 482, L33 (1997)
- Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. *A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros.* 482, 942 (1997)
- Cosmic Time Dilation. *I. E. Segal.* 482, L115 (1997)
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- The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue.* 480, L115 (1997)
- Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen.* 481, 809 (1997)
- Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti.* 482, L183 (1997)
- SHOCK WAVES**
- Radio Bridge Structure and Its Application to Estimate the Mach Number and Ambient Gas Temperature of Powerful Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 79 (1997)
- The Gaseous Environments of Powerful Extended Radio Sources. *Greg F. Wellman, Ruth A. Daly, & Lin Wan.* 480, 96 (1997)
- Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver.* 480, L47 (1997)
- Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya.* 480, 694 (1997)
- The Density Spike in Cosmic-Ray-modified Shocks: Formation, Evolution, and Instability. *Byung-Il Jun & T. W. Jones.* 481, 253 (1997)
- Formation of Solar Calcium H and K Bright Grains. *Mats Carlsson & Robert F. Stein.* 481, 500 (1997)
- Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin.* 481, 838 (1997)
- Accretion and UV Variability in BP Tauri. *Ana I. Gómez de Castro & M. Franqueira.* 482, 465 (1997)
- Collimation of Astrophysical Jets: The Proto-Planetary Nebula He 3-1475. *Kazimierz J. Borkowski, John M. Blondin, & J. Patrick Harrington.* 482, L97 (1997)
- Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models. *Rachid Ouyed & Ralph E. Pudritz.* 482, 712 (1997)
- The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)
- Impact of Relativistic Fireballs on External Matter: Numerical Models of Cosmological Gamma-Ray Bursts. *A. Panaitescu, L. Wen, P. Laguna, & P. Mészáros.* 482, 942 (1997)
- Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. *K. R. Flammer, D. A. Mendis, & V. D. Shapiro.* 482, 1021 (1997)
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- Survival of Planetary Systems. *William R. Ward.* 482, L211 (1997)
- SPACE VEHICLES**
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- STARS: ABUNDANCES**
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- Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn.* 480, 784 (1997)
- Abundance Analyses of Field RV Tauri Variables. III. DY Aquilae, SS Geminorum, CT Orionis, and CE Virginis. *Guillermo Gonzalez, David L. Lambert, & Sunatra Giridhar.* 481, 452 (1997)
- The Galactic Oxygen Abundance Gradient. *Stephen J. Smartt & William Robert J. Rolleston.* 481, L47 (1997)
- The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemec.* 482, 203 (1997)
- The Accreting White Dwarf in the Close Binary EUVE J1016-053. *S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan.* 482, L73 (1997)
- HR 6060: The Closest Ever Solar Twin? *G. F. Porto de Mello & L. da Silva.* 482, L89 (1997)
- STARS: ACTIVITY**
- Are Coronae of Magnetically Active Stars Heated by Flares? *Manuel Güdel.* 480, L121 (1997)
- The Emergence of Magnetic Flux Loops in Sunlike Stars. *Edward E. DeLuca, Yuhong Fan, & Steven H. Saar.* 481, 369 (1997)
- Radiative Transfer Effects on the Stability of Sound Waves in a Polytopic Atmosphere. *James MacDonald & Dermott Mullan.* 481, 963 (1997)
- STARS: AGB AND POST-AGB**
- Luminous Red Stars in Local Group Dwarf Elliptical Galaxies: An Intermediate-Age Population? *David Martínez-Delgado & Antonio Aparicio.* 480, L107 (1997)
- Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin.* 481, 420 (1997)
- The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemec.* 482, 203 (1997)
- Neutral Atomic Carbon in the Globules of the Helix. *K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller.* 482, L101 (1997)
- High-Resolution X-Ray Image of the Hydrogen-deficient Planetary Nebula Abell 30. *You-Hua Chu, Thomas H. Chang, & Gail M. Conway.* 482, 891 (1997)
- Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens.* 482, 897 (1997)
- STARS: ATMOSPHERES**
- Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji.* 480, L39 (1997)
- Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn.* 480, 784 (1997)
- Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)
- The Galactic Oxygen Abundance Gradient. *Stephen J. Smartt & William Robert J. Rolleston.* 481, L47 (1997)
- Radiative Transfer Effects on the Stability of Sound Waves in a Polytopic Atmosphere. *James MacDonald & Dermott Mullan.* 481, 963 (1997)
- Low-Mass Normal-Matter Atmospheres of Strange Stars and Their Radiation. *Vladimir V. Usov.* 481, L107 (1997)
- Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss.* 482, 546 (1997)
- Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls.* 482, 757 (1997)
- Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti.* 482, L183 (1997)
- STARS: BINARIES: CLOSE**
- Einstein Radii from Binary-Source Lensing Events. *Cheongho Han & Andrew Gould.* 480, 196 (1997)
- Energy Extraction from a Relativistic Accretion Disk by Reflection Effect. *P. Hadrava, G. Bao, & E. Østgaard.* 480, 324 (1997)

- The Infrared Companions of T Tauri Stars. *C. D. Koresko, T. M. Herbst, & Ch. Leinert.* 480, 741 (1997)
- The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue.* 480, L115 (1997)
- The Fate of Merging White Dwarfs. *Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch.* 481, 355 (1997)
- On Synchronization in Detached Close Binaries: Reply to Rieutord and Zahn. *Monique Tassoul & Jean-Louis Tassoul.* 481, 363 (1997)
- Observations of the SW Sextantis Star BH Lyncis in a High State. *D. W. Hoard & Paula Szkody.* 481, 433 (1997)
- The Formation of Low-Mass Transient X-Ray Binaries. *A. R. King & U. Kolb.* 481, 918 (1997)
- Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato.* 481, 936 (1997)
- S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. *W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher.* 481, L93 (1997)
- Advection-dominated Accretion Model of the Black Hole V404 Cygni in Quiescence. *Ramesh Narayan, Didier Barret, & Jeffrey E. McClintock.* 482, 448 (1997)
- Time-Resolved Ultraviolet Observations of the Globular Cluster X-Ray Source in NGC 6624: The Shortest Known Period Binary System. *Scott F. Anderson, Bruce Margon, Eric W. Deutsch, Ronald A. Downes, & Richard G. Allen.* 482, L69 (1997)
- The Accreting White Dwarf in the Close Binary EUVE J1016-053. *S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan.* 482, L73 (1997)
- Observations of Two Millisecond Pulsars in the Globular Cluster NGC 5904. *S. B. Anderson, A. Wolszczan, S. R. Kulkarni, & T. A. Prince.* 482, 870 (1997)
- Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter.* 482, 919 (1997)
- Binary-induced Neutron Star Compression, Heating, and Collapse. *G. J. Mathews & J. R. Wilson.* 482, 929 (1997)
- First Hubble Space Telescope Observations of Mira AB Wind-accreting Binary Systems. *Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan.* 482, L175 (1997)
- STARS: BINARIES: ECLIPSING**
- Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan.* 481, 782 (1997)
- STARS: BINARIES: GENERAL**
- Numerical Modeling of Tidal Effects in Polytropic Accretion Disks. *Patrick Godon.* 480, 329 (1997)
- Optical/Near-Infrared Observations of GRO J1744-28. *D. M. Cole, D. E. Vanden Berk, S. A. Severson, M. C. Miller, J. M. Quashnock, R. C. Nichol, D. Q. Lamb, K. Hurley, P. Blanco, C. Lidman, & K. Glazebrook.* 480, 377 (1997)
- Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. *Fumitaka Nakamura & Tomoyuki Hanawa.* 480, 701 (1997)
- Formation of Millisecond Pulsars from Accretion-induced Collapse and Constraints on Pulsar Gamma-Ray Burst Models. *Insu Yi & Eric G. Blackman.* 482, 383 (1997)
- Neutron Star Masses and Radii as Inferred from Kilohertz Quasi-periodic Oscillations. *W. Zhang, T. E. Strohmayer, & J. H. Swank.* 482, L167 (1997)
- STARS: BINARIES: SPECTROSCOPIC**
- The Planet around 51 Pegasi. *Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan.* 481, 926 (1997)
- STARS: BINARIES: SYMBIOTIC**
- Spatial Resolution of the R Aquarii Binary System. *J. M. Hollis, J. A. Pedely, & R. G. Lyon.* 482, L85 (1997)
- STARS: BINARIES: VISUAL**
- The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck.* 481, 378 (1997)
- Detection Rates for Close Binaries via Microlensing. *B. Scott Gaudi & Andrew Gould.* 482, 83 (1997)
- Clustering of Young Stars in Taurus, Ophiuchus, and the Orion Trapezium. *M. Simon.* 482, L81 (1997)
- STARS: BLUE STRAGGLERS**
- Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan.* 481, 782 (1997)
- S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. *W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher.* 481, L93 (1997)
- STARS: CHROMOSPHERES**
- Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver.* 480, L47 (1997)
- STARS: CIRCUMSTELLAR MATTER**
- The Physics of Dust Coagulation and the Structure of Dust Aggregates in Space. *C. Dominik & A. G. M. Tielens.* 480, 647 (1997)
- The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue.* 480, L115 (1997)
- Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin.* 481, 420 (1997)
- Faraday Depolarization and Circumstellar SiO Masers. *Bradley K. Wallin & William D. Watson.* 481, 832 (1997)
- Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. *K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff.* 481, 866 (1997)
- Near-Infrared Emission of Protostars. *Nuria Calvet, Lee Hartmann, & Stephen E. Strom.* 481, 912 (1997)
- On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)
- Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens.* 482, 897 (1997)
- Oscillating Shells: A Model for a Variable Cosmic Object. *Darlo Núñez.* 482, 963 (1997)
- STARS: CORONAE**
- Are Coronae of Magnetically Active Stars Heated by Flares? *Manuel Güdel.* 480, L121 (1997)
- STARS: DISTANCES**
- Rates for Parallax-shifted Microlensing Events from Ground-based Observations of the Galactic Bulge. *Ari Buchalter & Marc Kamionkowski.* 482, 782 (1997)
- STARS: EARLY-TYPE**
- Multiperiodicity of ζ Ophiuchi from Multisite Observations. *E. Kambe, R. Hirata, H. Ando, J. Cuypers, M. Katoh, E. J. Kennelly, G. A. H. Walker, S. Štefl, & A. E. Tarasov.* 481, 406 (1997)
- The Galactic Oxygen Abundance Gradient. *Stephen J. Smartt & William Robert J. Rolleston.* 481, L47 (1997)
- STARS: EMISSION-LINE, BE**
- Multiperiodicity of ζ Ophiuchi from Multisite Observations. *E. Kambe, R. Hirata, H. Ando, J. Cuypers, M. Katoh, E. J. Kennelly, G. A. H. Walker, S. Štefl, & A. E. Tarasov.* 481, 406 (1997)
- Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. *Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata.* 481, 467 (1997)
- Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata.* 481, 479 (1997)
- On the Line Profile Variations and Nonradial Pulsation Modes of ζ Tauri (HD 37202). *Anthony B. Kaye & Douglas R. Gies.* 482, 1028 (1997)
- STARS: EVOLUTION**
- Theoretical Models of the Angular Momentum Evolution of Solar-Type Stars. *Anita Krishnamurthi, M. H. Pinsonneault, S. Barnes, & S. Sofia.* 480, 303 (1997)
- UIT Detection of Hot Stars in the Globular Cluster NGC 362. *Ben Dorman, Ronak Y. Shah, Robert W. O'Connell, Wayne B. Landsman, Robert T. Rood, Ralph C. Bohlin, Susan G. Neff, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 480, L31 (1997)

- Keck Observation of Lithium in a Cool Halo Dwarf Common Proper-Motion Pair. *Constantine P. Deliyannis & Sean G. Ryan.* 480, L43 (1997)
- The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New.* 480, L75 (1997)
- Hot White Dwarfs in the *Extreme Ultraviolet Explorer* Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis.* 480, 714 (1997)
- Differences in the Cooling Behavior of Strange Quark Matter Stars and Neutron Stars. *Christoph Schaab, Bernd Hermann, Fridolin Weber, & Manfred K. Weigel.* 480, L111 (1997)
- Discovery of Four Isolated Millisecond Pulsars. *M. Bailes, S. Johnston, J. F. Bell, D. R. Lorimer, B. W. Stappers, R. N. Manchester, A. G. Lyne, L. Nicastro, N. D'Amico, & B. M. Gaensler.* 481, 386 (1997)
- The Formation of Low-Mass Transient X-Ray Binaries. *A. R. King & U. Kolb.* 481, 918 (1997)
- The End of the Main Sequence. *Gregory Laughlin, Peter Bodenheimer, & Fred C. Adams.* 482, 420 (1997)
- Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. *Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky.* 482, 442 (1997)
- On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)
- On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)
- Binary-induced Neutron Star Compression, Heating, and Collapse. *G. J. Mathews & J. R. Wilson.* 482, 929 (1997)
- STARS: FLARE**
- Are Coronae of Magnetically Active Stars Heated by Flares? *Manuel Güdel.* 480, L121 (1997)
- STARS: FORMATION**
- Molecules at High Redshift: The Evolution of the Cool Phase of Protogalactic Disks. *Colin A. Norman & Marco Spaans.* 480, 145 (1997)
- Self-similar Collapse of a Self-gravitating Viscous Disk. *Shin Mineshige & Masayuki Umemura.* 480, 167 (1997)
- A Universal Formation Mechanism for Open and Globular Clusters in Turbulent Gas. *Bruce G. Elmegreen & Yuri N. Efremov.* 480, 235 (1997)
- Theoretical Models of the Angular Momentum Evolution of Solar-Type Stars. *Anita Krishnamurthi, M. H. Pinsonneault, S. Barnes, & S. Sofia.* 480, 303 (1997)
- First Astronomical Detection of the Cumulene Carbon Chain Molecule H_2C_6 in TMC-1. *W. D. Langer, T. Velusamy, T. B. H. Kuiper, R. Peng, M. C. McCarthy, M. J. Travers, A. Kovács, C. A. Gottlieb, & P. Thaddeus.* 480, L63 (1997)
- Full Synthesis Observations of CH_3CH_2CN in Sagittarius B2: Further Evidence for Grain Chemistry. *Yanti Miao & Lewis E. Snyder.* 480, L67 (1997)
- A Production Mechanism for Clusters of Dense Cores. *Shu-ichiro Inutsuka & Shoken M. Miyama.* 480, 681 (1997)
- Interstellar Cloud Formation through Aggregation of Cold Blobs in a Two-Phase Gas Mixture. *Hideyuki Kamaya.* 480, 694 (1997)
- Nonaxisymmetric Evolution of Dynamically Contracting Disks and Its Implication for Binary Formation. *Fumitaka Nakamura & Tomoyuki Hanawa.* 480, 701 (1997)
- S255-2: The Formation of a Stellar Cluster. *Eric M. Howard, Judith L. Pipher, & William J. Forrest.* 481, 327 (1997)
- Sulfuretted Molecules in Hot Cores. *S. B. Charnley.* 481, 396 (1997)
- Near-Infrared Emission of Protostars. *Nuria Calvet, Lee Hartmann, & Stephen E. Strom.* 481, 912 (1997)
- Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato.* 481, 936 (1997)
- A High Spatial Resolution Study of the ON2 Massive Star-forming Region. *D. S. Shepherd, E. Churchwell, & D. J. Wilner.* 482, 355 (1997)
- Kelvin-Helmholtz and Thermal-Dynamic Instabilities with Self-Gravity: A New Gravitational Interface Instability. *James H. Hunter, Jr., Rodney W. Whitaker, & Richard V. E. Lovelace.* 482, 852 (1997)
- Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker.* 482, L195 (1997)
- STARS: FUNDAMENTAL PARAMETERS**
- Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji.* 480, L39 (1997)
- Hot White Dwarfs in the *Extreme Ultraviolet Explorer* Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis.* 480, 714 (1997)
- Analyses of the Light Curves of the Eclipsing Binaries in the Globular Cluster M71. *J. R. McVean, E. F. Milone, Mario Mateo, & L. Yan.* 481, 782 (1997)
- HR 6060: The Closest Ever Solar Twin? *G. F. Porto de Mello & L. da Silva.* 482, L89 (1997)
- STARS: HERTZSPRUNG-RUSSELL DIAGRAM**
- Luminous Red Stars in Local Group Dwarf Elliptical Galaxies: An Intermediate-Age Population? *David Martínez-Delgado & Antonio Aparicio.* 480, L107 (1997)
- STARS: HORIZONTAL-BRANCH**
- UIT Detection of Hot Stars in the Globular Cluster NGC 362. *Ben Dorman, Ronak Y. Shah, Robert W. O'Connell, Wayne B. Landsman, Robert T. Rood, Ralph C. Bohlin, Susan G. Neff, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 480, L31 (1997)
- Peculiar Multimodality on the Horizontal Branch of the Globular Cluster NGC 2808. *Craig Sosin, Ben Dorman, S. George Djorgovski, Giampaolo Piotto, R. Michael Rich, Ivan R. King, James Liebert, E. Sterl Phinney, & Alvio Renzini.* 480, L35 (1997)
- A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. *J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen.* 481, 775 (1997)
- On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)
- STARS: INDIVIDUAL**
- Constellation Name: 2 Andromedae**
- Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. *K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff.* 481, 866 (1997)
- Constellation Name: TX Camelopardalis**
- Imaging the Magnetic Field in the Atmosphere of TX Camelopardalis. *A. J. Kemball & P. J. Diamond.* 481, L111 (1997)
- Constellation Name: EZ Canis Majoris**
- Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. *Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko.* 482, 470 (1997)
- Constellation Name: α Centauri**
- Hubble Space Telescope Beryllium Abundances in the α Centauri System. *F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn.* 480, 784 (1997)
- Constellation Name: δ Ceti**
- First Hubble Space Telescope Observations of Mira AB Wind-accreting Binary Systems. *Margarita Karovska, Warren Hack, John Raymond, & Edward Guinan.* 482, L175 (1997)
- Constellation Name: Cygnus X-1**
- The Cessation of Flickering during Dips in Cygnus X-1. *M. Bahucińska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue.* 480, L115 (1997)
- Constellation Name: NML Cygni**
- Nonuniform Dust Outflow Observed around Infrared Object NML Cygni. *J. D. Monnier, M. Bester, W. C. Danchi, M. A. Johnson, E. A. Lipman, C. H. Townes, P. G. Tuthill, T. R. Geballe, D. Nishimoto, & P. W. Kervin.* 481, 420 (1997)
- Constellation Name: V404 Cygni**
- Advection-dominated Accretion Model of the Black Hole V404 Cygni in Quiescence. *Ramesh Narayan, Didier Barret, & Jeffrey E. McClintock.* 482, 448 (1997)

Constellation Name: λ Eridani

Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata. 481, 467 (1997)

Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata. 481, 479 (1997)

Constellation Name: VW Hydri

Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny. 480, L17 (1997)

Constellation Name: BH Lyncis

Observations of the SW Sextantis Star BH Lyncis in a High State. D. W. Hoard & Paula Szkody. 481, 433 (1997)

Constellation Name: ζ Ophiuchi

Multiperiodicity of ζ Ophiuchi from Multisite Observations. E. Kambe, R. Hirata, H. Ando, J. Cuypers, M. Katoh, E. J. Kennelly, G. A. H. Walker, S. Štefl, & A. E. Tarasov. 481, 406 (1997)

Constellation Name: V2116 Ophiuchi

Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding. 482, L171 (1997)

Constellation Name: 51 Pegasi

The Planet around 51 Pegasi. Geoffrey W. Marcy, R. Paul Butler, Eric Williams, Lars Bildsten, James R. Graham, Andrea M. Ghez, & J. Garrett Jernigan. 481, 926 (1997)

Constellation Name: Scorpius X-1

Scorpius X-1: Hints of Periodic Variability at Radio Frequencies. C. F. Bradshaw, B. J. Geldzahler, & E. B. Fomalont. 481, 489 (1997)

Kilohertz Quasi-periodic Oscillation Peak Separation Is Not Constant in Scorpius X-1. Michiel van der Klis, Rudy A. D. Wijnands, Keith Horne, & Wan Chen. 481, L97 (1997)

Constellation Name: ζ Tauri

On the Line Profile Variations and Nonradial Pulsation Modes of ζ Tauri (HD 37202). Anthony B. Kaye & Douglas R. Gies. 482, 1028 (1997)

Constellation Name: BP Tauri

Accretion and UV Variability in BP Tauri. Ana I. Gómez de Castro & M. Franqueira. 482, 465 (1997)

Constellation Name: T Tauri

Near-Infrared Spectropolarimetry of T Tauri. Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato. 481, 936 (1997)

Constellation Name: XZ Tauri

Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri. John E. Krist, Christopher J. Burrows, Karl R. Stapelfeldt, Gilda E. Ballester, John T. Clarke, David Crisp, Robin W. Evans, John S. Gallagher III, Richard E. Griffiths, J. Jeff Hester, Jon A. Holtzman, John G. Hoessel, Jeremy R. Mould, Paul A. Scowen, John T. Trauger, Alan M. Watson, & James A. Westphal. 481, 447 (1997)

Constellation Name: β Virginis

Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. Ildio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil. 480, 794 (1997)

Henry Draper Number: HD 119608

High-Resolution Ultraviolet Observations of the Highly Ionized Interstellar Gas toward Radio Loops I and IV. Kenneth R. Sembach, Blair D. Savage, & Todd M. Tripp. 480, 216 (1997)

Name: Procyon B

Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion. 480, 777 (1997)

Alphanumeric: CS 22892-052

The Thorium Chronometer in CS 22892-052: Estimates of the Age of the Galaxy. John J. Cowan, Andrew McWilliam, Christopher Sneden, & Debra L. Burris. 480, 246 (1997)

Alphanumeric: 1E 1740.7-2942

Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach. 482, L41 (1997)

Alphanumeric: EUVE J1016-053

The Accreting White Dwarf in the Close Binary EUVE J1016-053. S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan. 482, L73 (1997)

Alphanumeric: EXO 0748-676

Discovery of a New Soft X-Ray Excess in the Spectrum of EXO 0748-676. Brian Thomas, Robin Corbet, Alan P. Smale, Kazumi Asai, & Tadayasu Dotani. 480, L21 (1997)

Alphanumeric: GRO J1744-28

Evidence for "Propeller" Effects in X-Ray Pulsars GX 1+4 and GRO J1744-28. Wei Cui. 482, L163 (1997)

Alphanumeric: GRS 1915+105

RXTE Observations of QPOs in the Black Hole Candidate GRS 1915+105. E. H. Morgan, R. A. Remillard, & J. Greiner. 482, 993 (1997)

Alphanumeric: GX 1+4

Evidence for "Propeller" Effects in X-Ray Pulsars GX 1+4 and GRO J1744-28. Wei Cui. 482, L163 (1997)

Alphanumeric: HH 100

Spectral Analysis Using the Wavelet Transform. Jean-Luc Starck, Ralf Siebenmorgen, & Roland Gredel. 482, 1011 (1997)

Alphanumeric: KS 1731-260

Discovery of Two Simultaneous Kilohertz Quasi-periodic Oscillations in KS 1731-260. Rudy A. D. Wijnands & Michiel van der Klis. 482, L65 (1997)

Alphanumeric: PG 1346+082

Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis). J. L. Provencal, D. E. Winget, R. E. Nather, E. L. Robinson, J. C. Clemens, P. A. Bradley, C. F. Claver, S. J. Kleinman, A. D. Grauer, B. P. Hine, L. Ferrario, D. O'Donoghue, B. Warner, G. Vauclair, M. Chevreton, S. O. Kepler, M. A. Wood, & G. W. Henry. 480, 383 (1997)

Alphanumeric: SMC X-1

Harmonic Coupling of the Red Noise in X-Ray Pulsars. L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi. 481, 943 (1997)

Alphanumeric: SVS 13

Is SVS 13 the Exciting Source of the HH 7-11 Flow? Luis F. Rodríguez, Guillem Anglada, & Salvador Curiel. 480, L125 (1997)

Alphanumeric: 4U 1608-52

Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. Philip Kaaret, Eric C. Ford, & Kaiyou Chen. 480, L27 (1997)

Alphanumeric: 4U 1636-536

Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. Philip Kaaret, Eric C. Ford, & Kaiyou Chen. 480, L27 (1997)

Alphanumeric: V19

The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. James K. McCarthy & James M. Nemec. 482, 203 (1997)

STARS: INTERIORS

Theoretical Models of the Angular Momentum Evolution of Solar-Type Stars. Anita Krishnamurthi, M. H. Pinsonneault, S. Barnes, & S. Sofia. 480, 303 (1997)

Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion. 480, 777 (1997)

The Fate of Merging White Dwarfs. Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch. 481, 355 (1997)

On Synchronization in Detached Close Binaries: Reply to Rieutord and Zahn. Monique Tassoul & Jean-Louis Tassoul. 481, 363 (1997)

The End of the Main Sequence. Gregory Laughlin, Peter Bodenheimer, & Fred C. Adams. 482, 420 (1997)

Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky. 482, 442 (1997)

Binary-induced Neutron Star Compression, Heating, and Collapse. G. J. Mathews & J. R. Wilson. 482, 929 (1997)

STARS: KINEMATICS

The Dynamics of M15: Observations of the Velocity Dispersion Profile and Fokker-Planck Models. *J. D. Dull, H. N. Cohn, P. M. Lugger, B. W. Murphy, P. O. Seitzer, P. J. Callanan, R. G. M. Rutten, & P. A. Charles.* 481, 267 (1997)

A Dynamical and Kinematical Model of the Galactic Stellar Halo and Possible Implications for Galaxy Formation Scenarios. *J. Sommer-Larsen, T. C. Beers, C. Flynn, R. Wilhelm, & P. R. Christensen.* 481, 775 (1997)

Neutron Star Population Dynamics. I. Millisecond Pulsars. *J. M. Cordes & David F. Chernoff.* 482, 971 (1997)

STARS: LATE-TYPE

Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji.* 480, L39 (1997)

Abundance Analyses of Field RV Tauri Variables. III. DY Aquilae, SS Geminorum, CT Orionis, and CE Virginis. *Guillermo Gonzalez, David L. Lambert, & Sunatra Giridhar.* 481, 452 (1997)

The End of the Main Sequence. *Gregory Laughlin, Peter Bodenheimer, & Fred C. Adams.* 482, 420 (1997)

On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)

M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. *Andrew Gould, John N. Bahcall, & Chris Flynn.* 482, 913 (1997)

STARS: LOW-MASS, BROWN DWARFS

Spectral Evidence for Dust in Late-Type M Dwarfs. *Hugh R. A. Jones & Takashi Tsuji.* 480, L39 (1997)

The End of the Main Sequence. *Gregory Laughlin, Peter Bodenheimer, & Fred C. Adams.* 482, 420 (1997)

M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. *Andrew Gould, John N. Bahcall, & Chris Flynn.* 482, 913 (1997)

STARS: LUMINOSITY FUNCTION, MASS FUNCTION

Detection Rates for Close Binaries via Microlensing. *B. Scott Gaudi & Andrew Gould.* 482, 83 (1997)

The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould.* 482, 98 (1997)

M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. *Andrew Gould, John N. Bahcall, & Chris Flynn.* 482, 913 (1997)

STARS: MAGNETIC FIELDS

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Torque Reversal in Accretion-powered X-Ray Pulsars. *Insu Yi, J. Craig Wheeler, & Ethan T. Vishniac.* 481, L51 (1997)

Harmonic Coupling of the Red Noise in X-Ray Pulsars. *L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi.* 481, 943 (1997)

Imaging the Magnetic Field in the Atmosphere of TX Camelopardalis. *A. J. Kemball & P. J. Diamond.* 481, L111 (1997)

Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. *Matthew G. Baring & Alice K. Harding.* 482, 372 (1997)

Formation of Millisecond Pulsars from Accretion-induced Collapse and Constraints on Pulsar Gamma-Ray Burst Models. *Insu Yi & Eric G. Blackman.* 482, 383 (1997)

Accretion and UV Variability in BP Tauri. *Ana I. Gómez de Castro & M. Franqueira.* 482, 465 (1997)

STARS: MASS LOSS

Hot Evolved Objects in Different Parent Galaxies: The Stellar Winds of Three Planetary Nebula Nuclei in the Large Magellanic Cloud. *Luciana Bianchi, Emanuel Vassiliadis, & Michael Dopita.* 480, 290 (1997)

A Radio Survey for Pulsar Wind Nebulae. *D. A. Frail & B. R. Scharringhausen.* 480, 364 (1997)

Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata.* 481, 479 (1997)

Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. *Claus Leitherer, Jessica M. Chapman, & Bärbel Koribalski.* 481, 898 (1997)

Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. *T. W. Hartquist, J. E. Dyson, & R. J. R. Williams.* 482, 182 (1997)

Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. *Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko.* 482, 470 (1997)

On a Rapid Lithium Enrichment and Depletion of K Giant Stars. *R. de la Reza, N. A. Drake, L. da Silva, C. A. O. Torres, & E. L. Martin.* 482, L77 (1997)

Neutral Atomic Carbon in the Globules of the Helix. *K. Young, P. Cox, P. J. Huggins, T. Forveille, & R. Bachiller.* 482, L101 (1997)

Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls.* 482, 757 (1997)

Axially Symmetric Superwinds of Proto-Planetary Nebulae with 21 Micron Dust Features. *M. Meixner, C. J. Skinner, J. R. Graham, E. Keto, J. G. Jernigan, & J. F. Arens.* 482, 897 (1997)

Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian.* 482, 951 (1997)

Fluctuations in Stellar Winds and Their Possible Connections to the Wind Mass Flux. *Tzihong Chiueh.* 482, L179 (1997)

Kinematics of the Molecular Sheath of the HH 111 Optical Jet. *Neil M. Nagar, Stuart N. Vogel, James M. Stone, & Eve C. Ostriker.* 482, L195 (1997)

STARS: NEUTRON

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Optical/Near-Infrared Observations of GRO J1744–28. *D. M. Cole, D. E. Vanden Berk, S. A. Sevenson, M. C. Miller, J. M. Quashnock, R. C. Nichol, D. Q. Lamb, K. Hurley, P. Blanco, C. Lidman, & K. Glazebrook.* 480, 377 (1997)

Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. *Philip Kaaret, Eric C. Ford, & Kaiyou Chen.* 480, L27 (1997)

Temporal and Spectral Properties of Comptonized Radiation and Its Applications. *Demosthenes Kazanas, Xin-Min Hua, & Lev Titarchuk.* 480, 735 (1997)

Differences in the Cooling Behavior of Strange Quark Matter Stars and Neutron Stars. *Christoph Schaab, Bernd Hermann, Fridolin Weber, & Manfred K. Weigel.* 480, L111 (1997)

The Changing Structure of the Radio Nebula around the Soft Gamma-Ray Repeater SGR 1806–20. *D. A. Frail, G. Vasishth, & S. R. Kulkarni.* 480, L129 (1997)

The Formation of Low-Mass Transient X-Ray Binaries. *A. R. King & U. Kolb.* 481, 918 (1997)

Harmonic Coupling of the Red Noise in X-Ray Pulsars. *L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi.* 481, 943 (1997)

Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. *J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh.* 481, 954 (1997)

Kilohertz Quasi-periodic Oscillation Peak Separation Is Not Constant in Scorpius X-1. *Michiel van der Klis, Rudy A. D. Wijnands, Keith Horne, & Wan Chen.* 481, L97 (1997)

On the Correlation of Torque and Luminosity in GX 1+4. *Deepto Chakrabarty, Lars Bildsten, Mark H. Finger, John M. Grunsfeld, Danny T. Koh, Robert W. Nelson, Thomas A. Prince, Brian A. Vaughan, & Robert B. Wilson.* 481, L101 (1997)

Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. *Matthew G. Baring & Alice K. Harding.* 482, 372 (1997)

On Electrostatic Positron Acceleration in the Accretion Flow onto Neutron Stars. *Roberto Turolla, Silvia Zane, Aldo Treves, & Andrei Illarionov.* 482, 377 (1997)

Postburst Quasi-periodic Oscillations from GRO J1744–28 and from the Rapid Burster. *Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou.* 482, L53 (1997)

Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. *Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk.* 482, L57 (1997)

Discovery of Two Simultaneous Kilohertz Quasi-periodic Oscillations in KS 1731–260. *Rudy A. D. Wijnands & Michiel van der Klis.* 482, L65 (1997)

- Binary-induced Neutron Star Compression, Heating, and Collapse. *G. J. Mathews & J. R. Wilson*. 482, 929 (1997)
- Neutron Star Population Dynamics. I. Millisecond Pulsars. *J. M. Cordes & David F. Chernoff*. 482, 971 (1997)
- ASCA Observations of PSR 1929+10 and PSR 0950+08. *F. Y.-H. Wang & J. P. Halpern*. 482, L159 (1997)
- Neutron Star Masses and Radii as Inferred from Kilohertz Quasi-periodic Oscillations. *W. Zhang, T. E. Strohmayer, & J. H. Swank*. 482, L167 (1997)
- Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding*. 482, L171 (1997)
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- On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov*. 481, 127 (1997)
- Observations of the SW Sextantis Star BH Lyncis in a High State. *D. W. Hoard & Paula Szkody*. 481, 433 (1997)
- An Evolving Radio Source in the Young Star-forming Region Cepheus A. *V. A. Hughes*. 481, 857 (1997)
- The Structure of Cooling Fronts in Accretion Disks. *Ethan T. Vishniac*. 482, 414 (1997)
- Mass Transfer Cycles in Close Binaries with Evolved Companions. *A. R. King, J. Frank, U. Kolb, & H. Ritter*. 482, 919 (1997)
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- Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis). *J. L. Provencal, D. E. Winget, R. E. Nather, E. L. Robinson, J. C. Clemens, P. A. Bradley, C. F. Claver, S. J. Kleinman, A. D. Grauer, B. P. Hine, L. Ferrario, D. O'Donoghue, B. Warner, G. Vauclair, M. Chevreton, S. O. Kepler, M. A. Wood, & G. W. Henry*. 480, 383 (1997)
- A Comparison of the Near-Infrared and Visible Spectra of Three Bright Cepheids. *R. Paul Butler & Roger A. Bell*. 480, 767 (1997)
- Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ildio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil*. 480, 794 (1997)
- Multiplicity of ζ Ophiuchi from Multisite Observations. *E. Kambe, R. Hirata, H. Ando, J. Cuypers, M. Katoh, E. J. Kennelly, G. A. H. Walker, S. Stefl, & A. E. Tarasov*. 481, 406 (1997)
- Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata*. 481, 479 (1997)
- Radiative Transfer Effects on the Stability of Sound Waves in a Polytropic Atmosphere. *James MacDonald & Dermott Mullan*. 481, 963 (1997)
- The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars. *C. Alcock, R. A. Allsman, D. Alves, T. S. Axelrod, A. C. Becker, D. P. Bennett, K. H. Cook, K. C. Freeman, K. Griest, J. Guern, M. J. Lehner, S. L. Marshall, D. Minniti, B. A. Peterson, M. R. Pratt, P. J. Quinn, A. W. Rodgers, W. Sutherland, & D. L. Welch*. 482, 89 (1997)
- Oscillating Shells: A Model for a Variable Cosmic Object. *Dario Núñez*. 482, 963 (1997)
- RXTE Observations of QPOs in the Black Hole Candidate GRS 1915+105. *E. H. Morgan, R. A. Remillard, & J. Greiner*. 482, 993 (1997)
- On the Line Profile Variations and Nonradial Pulsation Modes of ζ Tauri (HD 37202). *Anthony B. Kaye & Douglas R. Gies*. 482, 1028 (1997)
- Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding*. 482, L171 (1997)
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- Keck Observation of Lithium in a Cool Halo Dwarf Common Proper-Motion Pair. *Constantine P. Deliyannis & Sean G. Ryan*. 480, L43 (1997)
- Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver*. 480, L47 (1997)
- The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemec*. 482, 203 (1997)
- STARS: PRE-MAIN-SEQUENCE**
- Submillimeter Polarimetry of Class 0 Protostars: Constraints on Magnetized Outflow Models. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson*. 480, 255 (1997)
- X-Ray Ionization of Protoplanetary Disks. *A. E. Glassgold, J. Najita, & J. Igea*. 480, 344 (1997)
- The Infrared Companions of T Tauri Stars. *C. D. Koresko, T. M. Herbst, & Ch. Leinert*. 480, 741 (1997)
- Models of the Spectral Energy Distributions of FU Orionis Stars. *N. J. J. Turner, P. Bodenheimer, & K. R. Bell*. 480, 754 (1997)
- Is SVS 13 the Exciting Source of the HH 7-11 Flow? *Luis F. Rodriguez, Guillem Anglada, & Salvador Curiel*. 480, L125 (1997)
- The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck*. 481, 378 (1997)
- A Search for Close Bright Companions to AeBe Stars. *N. Pirzkal, E. J. Spillar, & H. M. Dyck*. 481, 392 (1997)
- Hubble Space Telescope WFPC2 Images of Emission Nebulosity near XZ Tauri. *John E. Krist, Christopher J. Burrows, Karl R. Stapelfeldt, Gilda E. Ballester, John T. Clarke, David Crisp, Robin W. Evans, John S. Gallagher III, Richard E. Griffiths, J. Jeff Hester, Jon A. Holtzman, John G. Hoessel, Jeremy R. Mould, Paul A. Scowen, John T. Trauger, Alan M. Watson, & James A. Westphal*. 481, 447 (1997)
- Near-Infrared Emission of Protostars. *Nuria Calvet, Lee Hartmann, & Stephen E. Strom*. 481, 912 (1997)
- Near-Infrared Spectropolarimetry of T Tauri. *Naoto Kobayashi, Tetsuya Nagata, Motohide Tamura, Taku Takeuchi, Hideki Takami, & Shuji Sato*. 481, 936 (1997)
- Millimeter and Radio Interferometry of Herbig Ae/Be Stars. *James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler*. 482, 433 (1997)
- Lithium Depletion in Fully Convective Pre-Main-Sequence Stars. *Lars Bildsten, Edward F. Brown, Christopher D. Matzner, & Greg Ushomirsky*. 482, 442 (1997)
- Accretion and UV Variability in BP Tauri. *Ana I. Gómez de Castro & M. Franqueira*. 482, 465 (1997)
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- Spectral Analysis Using the Wavelet Transform. *Jean-Luc Starck, Ralf Siebenmorgen, & Roland Gredel*. 482, 1011 (1997)
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- Discovery of Four Isolated Millisecond Pulsars. *M. Bailes, S. Johnston, J. F. Bell, D. R. Lorimer, B. W. Stappers, R. N. Manchester, A. G. Lyne, L. Nicastro, N. D'Amico, & B. M. Gaensler*. 481, 386 (1997)
- Torque Reversal in Accretion-powered X-Ray Pulsars. *Insu Yi, J. Craig Wheeler, & Ethan T. Vishniac*. 481, L51 (1997)
- Kilohertz Quasi-periodic Oscillation Peak Separation Is Not Constant in Scorpius X-1. *Michiel van der Klis, Rudy A. D. Wijnands, Keith Horne, & Wan Chen*. 481, L97 (1997)
- Magnetic Photon Splitting: Computations of Proper-Time Rates and Spectra. *Matthew G. Baring & Alice K. Harding*. 482, 372 (1997)
- Formation of Millisecond Pulsars from Accretion-induced Collapse and Constraints on Pulsar Gamma-Ray Burst Models. *Insu Yi & Eric G. Blackman*. 482, 383 (1997)
- Neutron Star Population Dynamics. I. Millisecond Pulsars. *J. M. Cordes & David F. Chernoff*. 482, 971 (1997)

STARS: PULSARS: INDIVIDUAL

Name: Crab Nebula

A Search for Ultra-High-Energy Gamma-Ray Emission from the Crab Nebula and Pulsar. *A. Borione, M. A. Catanese, M. C. Chantell, C. E. Covault, J. W. Cronin, B. E. Fick, L. F. Fortson, J. F. Fowler, K. G. Gibbs, M. A. K. Glasmacher, K. D. Green, D. B. Kieda, J. Matthews, B. J. Newport, D. F. Nitz, R. A. Ong, L. J. Rosenberg, D. Sinclair, & J. C. van der Velden.* 481, 313 (1997)

Name: Vela Pulsar

The ASCA Spectrum of the Vela Pulsar Jet. *Craig B. Markwardt & Hakki B. Ogelman.* 480, L13 (1997)

Alphanumeric: GRO J1744-28

Optical/Near-Infrared Observations of GRO J1744-28. *D. M. Cole, D. E. Vanden Berk, S. A. Sevenson, M. C. Miller, J. M. Quashnock, R. C. Nichol, D. Q. Lamb, K. Hurley, P. Blanco, C. Lidman, & K. Glazebrook.* 480, 377 (1997)

Alphanumeric: GX 1+4

On the Correlation of Torque and Luminosity in GX 1+4. *Deepto Chakrabarty, Lars Bildsten, Mark H. Finger, John M. Grunsfeld, Danny T. Koh, Robert W. Nelson, Thomas A. Prince, Brian A. Vaughan, & Robert B. Wilson.* 481, L101 (1997)

Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding.* 482, L171 (1997)

Alphanumeric: PSR 0950+08

ASCA Observations of PSR 1929+10 and PSR 0950+08. *F. Y.-H. Wang & J. P. Halpern.* 482, L159 (1997)

Alphanumeric: PSR 1929+10

ASCA Observations of PSR 1929+10 and PSR 0950+08. *F. Y.-H. Wang & J. P. Halpern.* 482, L159 (1997)

Alphanumeric: PSR B1516+02A

Observations of Two Millisecond Pulsars in the Globular Cluster NGC 5904. *S. B. Anderson, A. Wolszczan, S. R. Kulkarni, & T. A. Prince.* 482, 870 (1997)

Alphanumeric: PSR B1516+02B

Observations of Two Millisecond Pulsars in the Globular Cluster NGC 5904. *S. B. Anderson, A. Wolszczan, S. R. Kulkarni, & T. A. Prince.* 482, 870 (1997)

Alphanumeric: PSR B1853+01

A Relativistic Bremsstrahlung/Inverse Compton Origin for 2EG J1857+0118 Associated with Supernova Remnant W44. *O. C. de Jager & A. Mastichiadis.* 482, 874 (1997)

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The Emergence of Magnetic Flux Loops in Sunlike Stars. *Edward E. DeLuca, Yuhong Fan, & Steven H. Saar.* 481, 369 (1997)

Neutron Star Population Dynamics. I. Millisecond Pulsars. *J. M. Cordes & David F. Chernoff.* 482, 971 (1997)

STARS: STATISTICS

Extreme Microlensing toward the Galactic Bulge. *Andrew Gould.* 480, 188 (1997)

Hot White Dwarfs in the Extreme Ultraviolet Explorer Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis.* 480, 714 (1997)

On the Rate of Novae in Galaxies of Different Types. *L. Yungelson, M. Livio, & A. Tutukov.* 481, 127 (1997)

The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck.* 481, 378 (1997)

Discovery of Four Isolated Millisecond Pulsars. *M. Bailes, S. Johnston, J. F. Bell, D. R. Lorimer, B. W. Stappers, R. N. Manchester, A. G. Lyne, L. Nicastro, N. D'Amico, & B. M. Gaensler.* 481, 386 (1997)

A Search for Close Bright Companions to AeBe Stars. *N. Pirzkal, E. J. Spillar, & H. M. Dyck.* 481, 392 (1997)

M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. *Andrew Gould, John N. Bahcall, & Chris Flynn.* 482, 913 (1997)

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Keck Observation of Lithium in a Cool Halo Dwarf Common Proper-Motion Pair. *Constantine P. Deliyannis & Sean G. Ryan.* 480, L43 (1997)

Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver.* 480, L47 (1997)

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Mass-Loss Rates and Stellar Wind Momenta of A Supergiants in M31: First Results from the Keck HIRES Spectrograph. *James K. McCarthy, Rolf-Peter Kudritzki, Daniel J. Lennon, Kim A. Venn, & Joachim Puls.* 482, 757 (1997)

Use of Red Supergiant Spectral Features as Age Indicators in Starburst Regions. *Y. D. Mayya.* 482, L149 (1997)

STARS: SUPERNOVAE: GENERAL

Dormant Dwarf Spheroidal Galaxies, Deactivated by Type Ia Supernovae. *A. Burkert & P. Ruiz-Lapuente.* 480, 297 (1997)

Langmuir Wave Generation through a Neutrino Beam Instability. *S. J. Hardy & D. B. Melrose.* 480, 705 (1997)

An Expanding Shell-like Molecular Cloud near the Galactic Center Arc. *Masato Tsuboi, Nobuharu Ukita, & Toshihiro Handa.* 481, 263 (1997)

Enhancement of Nuclear Reaction Rates in Dense Stellar Matter: A Path-Integral Monte Carlo Simulation Study. *Shuji Ogata.* 481, 883 (1997)

Burning of Two-Flavor Quark Matter into Strange Matter in Neutron Stars and in Supernova Cores. *J. D. Anand, Ashok Goyal, V. K. Gupta, & S. Singh.* 481, 954 (1997)

Gamma-Ray Line Signals from ²⁶Al and ⁶⁰Fe in the Galaxies of the Local Group. *F. X. Timmes & S. E. Woosley.* 481, L81 (1997)

Comparing Single-Cycle and Multicycle Explosive Scenarios for the Formation of Voids. *Oswaldo D. Miranda & Reuven Opher.* 482, 573 (1997)

Nucleosynthesis in Neutrino-driven Winds. II. Implications for Heavy Element Synthesis. *R. D. Hoffman, S. E. Woosley, & Y.-Z. Qian.* 482, 951 (1997)

Oscillating Shells: A Model for a Variable Cosmic Object. *Darío Núñez.* 482, 963 (1997)

Cosmic Time Dilation. *I. E. Segal.* 482, L115 (1997)

Time Dilation in the Supernova Light Curve and the Variable Mass Hypothesis. *J. V. Narlikar & H. C. Arp.* 482, L119 (1997)

STARS: SUPERNOVAE: INDIVIDUAL

Alphanumeric: SN 1006

Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin.* 481, 838 (1997)

Alphanumeric: SN 1986E

Radio Detection of SN 1986E in NGC 4302. *Marcos J. Montes, Schuyler D. Van Dyk, Kurt W. Weiler, Richard A. Sramek, & Nino Panagia.* 482, L61 (1997)

Alphanumeric: SN 1990N

Evidence for a High-Velocity Carbon-rich Layer in the Type Ia SN 1990N. *Adam Fisher, David Branch, Peter Nugent, & E. Baron.* 481, L89 (1997)

Alphanumeric: SN 1995K

Cosmic Time Dilation. *I. E. Segal.* 482, L115 (1997)

Time Dilation in the Supernova Light Curve and the Variable Mass Hypothesis. *J. V. Narlikar & H. C. Arp.* 482, L119 (1997)

STARS: VARIABLES: CEPHEIDS

Tip of the Red Giant Branch Distances to Galaxies. IV. Sextans B. *Shoko Sakai, Barry F. Madore, & Wendy L. Freedman.* 480, 589 (1997)

A Comparison of the Near-Infrared and Visible Spectra of Three Bright Cepheids. *R. Paul Butler & Roger A. Bell.* 480, 767 (1997)

The Chemical Composition and Period Change Rate of the Anomalous Cepheid V19 in NGC 5466. *James K. McCarthy & James M. Nemec.* 482, 203 (1997)

STARS: VARIABLES: OTHER

Spatial Resolution of the R Aquarii Binary System. *J. M. Hollis, J. A. Pedely, & R. G. Lyon.* 482, L85 (1997)

FU Orionis

Models of the Spectral Energy Distributions of FU Orionis Stars. *N. J. J. Turner, P. Bodenheimer, & K. R. Bell.* 480, 754 (1997)

RR Lyrae

The MACHO Project Large Magellanic Cloud Variable Star Inventory. III. Multimode RR Lyrae Stars, Distance to the Large Magellanic Cloud, and Age of the Oldest Stars. *C. Alcock, R. A. Allsman, D. Alves, T. S. Axelrod, A. C. Becker, D. P. Bennett, K. H. Cook, K. C. Freeman, K. Griest, J. Guern, M. J. Lehner, S. L. Marshall, D. Minniti, B. A. Peterson, M. R. Pratt, P. J. Quinn, A. W. Rodgers, W. Sutherland, & D. L. Welch.* 482, 89 (1997)

RV Tauri

Abundance Analyses of Field RV Tauri Variables. III. DY Aquilae, SS Geminorum, CT Orionis, and CE Virginis. *Guillermo Gonzalez, David L. Lambert, & Sunatra Giridhar.* 481, 452 (1997)

STARS: WHITE DWARFS

Dormant Dwarf Spheroidal Galaxies, Deactivated by Type Ia Supernovae. *A. Burkert & P. Ruiz-Lapuente.* 480, 297 (1997)

Whole Earth Telescope Observations of the Helium Interacting Binary PG 1346+082 (CR Bootis). *J. L. Provencal, D. E. Winget, R. E. Nather, E. L. Robinson, J. C. Clemens, P. A. Bradley, C. F. Claver, S. J. Kleinman, A. D. Grauer, B. P. Hine, L. Ferrario, D. O'Donoghue, B. Warner, G. Vauclair, M. Chevreton, S. O. Kepler, M. A. Wood, & G. W. Henry.* 480, 383 (1997)

Evidence of a Thermonuclear Runaway and Proton-Capture Material on a White Dwarf in a Dwarf Nova. *Edward M. Sion, F. H. Cheng, Warren M. Sparks, Paula Szkody, Min Huang, & Ivan Hubeny.* 480, L17 (1997)

Hot White Dwarfs in the *Extreme Ultraviolet Explorer* Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis.* 480, 714 (1997)

Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. *J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion.* 480, 777 (1997)

The Fate of Merging White Dwarfs. *Laurent Segretain, Gilles Chabrier, & Robert Mochkovitch.* 481, 355 (1997)

Enhancement of Nuclear Reaction Rates in Dense Stellar Matter: A Path-Integral Monte Carlo Simulation Study. *Shuji Ogata.* 481, 883 (1997)

S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. *W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher.* 481, L93 (1997)

The Chemical Residue of a White Dwarf-dominated Galactic Halo. *Brad K. Gibson & Jeremy R. Mould.* 482, 98 (1997)

Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. *Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss.* 482, 546 (1997)

STARS: WOLF-RAYET

Hot Evolved Objects in Different Parent Galaxies: The Stellar Winds of Three Planetary Nebula Nuclei in the Large Magellanic Cloud. *Luciana Bianchi, Emanuel Vassiliadis, & Michael Dopita.* 480, 290 (1997)

A New Superwind Wolf-Rayet Galaxy Markarian 1259. *Yoshiaki Taniguchi, & Roberto Terlevich.* 480, L9 (1997)

Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. *Claus Leitherer, Jessica M. Chapman, & Bärbel Korbalski.* 481, 898 (1997)

Detection of Wolf-Rayet Stars of WN and WC Subtypes in Super-Star Clusters of NGC 5253. *Daniel Schaerer, Thierry Contini, Daniel Kunth, & Georges Meynet.* 481, L75 (1997)

Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. *Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko.* 482, 470 (1997)

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Emerging Active Regions on the Sun and the Photospheric Abundance of Neon. *Kenneth G. Widing.* 480, 400 (1997)

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Emerging Active Regions on the Sun and the Photospheric Abundance of Neon. *Kenneth G. Widing.* 480, 400 (1997)

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Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu.* 482, 519 (1997)

The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)

Solar Variability and the Relation of Facular to Sunspot Areas during Solar Cycle 22. *G. A. Chapman, A. M. Cookson, & J. J. Dobias.* 482, 541 (1997)

Cosmic-Ray Modulation Parameters Derived from the Solar Diurnal Variation. *D. L. Hall, M. L. Duldig, & J. E. Humble.* 482, 1038 (1997)

Detection of Zonal Shear Flows beneath the Sun's Surface from f-Mode Frequency Splitting. *A. G. Kosovichev & J. Schou.* 482, L207 (1997)

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Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ildio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil.* 480, 794 (1997)

The Role of Helium in the Outer Solar Atmosphere. *V. H. Hansteen, E. Leer, & T. E. Holzer.* 482, 498 (1997)

Linear Polarization due to Lower Level Depopulation Pumping in Stellar Atmospheres. *Javier Trujillo Bueno & Egidio Landi Degl'Innocenti.* 482, L183 (1997)

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Imaging the Chromospheric Evaporation of the 1994 June 30 Solar Flare. *Adriana V. R. Silva, Haimin Wang, Dale E. Gary, Nariaki Nitta, & Harold Zirin.* 481, 978 (1997)

The Role of Helium in the Outer Solar Atmosphere. *V. H. Hansteen, E. Leer, & T. E. Holzer.* 482, 498 (1997)

The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)

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Electron Densities in Solar Flare Loops, Chromospheric Evaporation Upflows, and Acceleration Sites. *Markus J. Aschwanden & Arnold O. Benz.* 480, 825 (1997)

On the Subphotospheric Origin of Coronal Electric Currents. *Alexei A. Pevtsov, Richard C. Canfield, & Alexander N. McClymont.* 481, 973 (1997)

Charge States of Solar Cosmic Rays and Constraints on Acceleration Times and Coronal Transport. *D. Ruffolo.* 481, L119 (1997)

Coronal Heating and the Vertical Temperature Structure of the Quiet Corona. *M. S. Wheatland, P. A. Sturrock, & L. W. Acton.* 482, 510 (1997)

Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu.* 482, 519 (1997)

Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. *G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran.* 482, L109 (1997)

Relative Elemental Abundances of the Quiet Solar Corona as Determined by SERTS. *D. A. Falconer, J. M. Davila, & R. J. Thomas.* 482, 1050 (1997)

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Solar Variability and the Relation of Facular to Sunspot Areas during Solar Cycle 22. *G. A. Chapman, A. M. Cookson, & J. J. Dobias.* 482, 541 (1997)

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Electron Densities in Solar Flare Loops, Chromospheric Evaporation Upflows, and Acceleration Sites. *Markus J. Aschwanden & Arnold O. Benz.* 480, 825 (1997)

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Imaging the Chromospheric Evaporation of the 1994 June 30 Solar Flare. *Adriana V. R. Silva, Haimin Wang, Dale E. Gary, Nariaki Nitta, & Harold Zirin.* 481, 978 (1997)

Charge States of Solar Cosmic Rays and Constraints on Acceleration Times and Coronal Transport. *D. Ruffolo.* 481, L119 (1997)

What Is the Spatial Relationship between Hard X-Ray Footpoints and Vertical Electric Currents in Solar Flares? *Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi.* 482, 490 (1997)

The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)

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HR 6060: The Closest Ever Solar Twin? *G. F. Porto de Mello & L. da Silva.* 482, L89 (1997)

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Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. *J. Hirzberger, M. Vázquez, J. A. Bonet, A. Hanslmeier, & M. Sobotka.* 480, 406 (1997)

Formation of Solar Calcium H and K Bright Grains. *Mats Carlsson & Robert F. Stein.* 481, 500 (1997)

The Distribution of Cell Sizes of the Solar Chromospheric Network. *Herman J. Hagenaar, Carolus J. Schrijver, & Alan M. Title.* 481, 988 (1997)

SUN: INTERIOR

Solar Convection: Comparison of Numerical Simulations and Mixing-Length Theory. *William P. Abbett, Michelle Beaver, Barry Davids, Dali Georgobiani, Pamela Rathbun, & Robert F. Stein.* 480, 395 (1997)

The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New.* 480, L75 (1997)

Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich.* 480, 840 (1997)

Detection of Zonal Shear Flows beneath the Sun's Surface from f -Mode Frequency Splitting. *A. G. Kosovichev & J. Schou.* 482, L207 (1997)

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The Linear Response of a Magnetic Flux Tube to Buffeting by External p -Modes. *I. S. S. Hasan.* 480, 803 (1997)

Effects of Non-LTE Radiative Loss and Partial Ionization on the Structure of the Transition Region. *J. Chae, H. S. Yun, & A. I. Poland.* 480, 817 (1997)

Interactions of Convecting Magnetic Loops and Arcades. *Masao Ozaki, Tetsuya Sato, T. Hayashi, R. Horiuchi, K. Watanabe, Y. Todo, A. Kageyama, T. H. Watanabe, & H. Taramaru.* 481, 524 (1997)

On the Subphotospheric Origin of Coronal Electric Currents. *Alexei A. Pevtsov, Richard C. Canfield, & Alexander N. McClymont.* 481, 973 (1997)

Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu.* 482, 519 (1997)

Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk.* 482, 1065 (1997)

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The Solar Core: New Low- l p -Mode Fine-Spacing Results from BiSON. *W. J. Chaplin, Y. Elsworth, G. R. Isaak, C. P. McLeod, B. A. Miller, & R. New.* 480, L75 (1997)

Diagnostics of the External Physical Processes from Global Oscillations of Solar-like Stars. *Ildio Lopes, Sylvaine Turck-Chieze, Eric Michel, & Marie-Jo Goupil.* 480, 794 (1997)

The Linear Response of a Magnetic Flux Tube to Buffeting by External p -Modes. *I. S. S. Hasan.* 480, 803 (1997)

Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich.* 480, 840 (1997)

Radiative Transfer Effects on the Stability of Sound Waves in a Polytopic Atmosphere. *James MacDonald & Dermott Mullan.* 481, 963 (1997)

Detection of Zonal Shear Flows beneath the Sun's Surface from f -Mode Frequency Splitting. *A. G. Kosovichev & J. Schou.* 482, L207 (1997)

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Charge States of Solar Cosmic Rays and Constraints on Acceleration Times and Coronal Transport. *D. Ruffolo.* 481, L119 (1997)

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Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. *J. Hirzberger, M. Vázquez, J. A. Bonet, A. Hanslmeier, & M. Sobotka.* 480, 406 (1997)

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The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)

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The Postflare Loops and the Nearby Active Chromosphere of 1992 June 26. *J.-M. Malherbe, T. Tarbell, J. E. Wiik, B. Schmieder, Z. Frank, R. A. Shine, & L. van Driel-Gesztelyi.* 482, 535 (1997)

SUN: ROTATION

Contribution of Low- l p Modes to the Solar Equatorial Rotation Profile. *M. C. Rabello Soares, T. Roca Cortés, A. Jiménez, T. Appourchaux, & A. Eff-Darwich.* 480, 840 (1997)

Detection of Zonal Shear Flows beneath the Sun's Surface from f -Mode Frequency Splitting. *A. G. Kosovichev & J. Schou.* 482, L207 (1997)

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Interaction of the Solar Wind with Comet Hale-Bopp: Global Interaction and Microphysics. *K. R. Flammer, D. A. Mendis, & V. D. Shapiro.* 482, 1021 (1997)

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Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu.* 482, 519 (1997)

Solar Variability and the Relation of Facular to Sunspot Areas during Solar Cycle 22. *G. A. Chapman, A. M. Cookson, & J. J. Dobias.* 482, 541 (1997)

Stokes Profile Asymmetries in Solar Active Regions. *K. S. Balasubramaniam, S. L. Keil, & S. Tomczyk.* 482, 1065 (1997)

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Effects of Non-LTE Radiative Loss and Partial Ionization on the Structure of the Transition Region. *J. Chae, H. S. Yun, & A. I. Poland.* 480, 817 (1997)

SUN: UV RADIATION

Relative Elemental Abundances of the Quiet Solar Corona as Determined by SERTS. *D. A. Falconer, J. M. Davila, & R. J. Thomas.* 482, 1050 (1997)

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Electron Densities in Solar Flare Loops, Chromospheric Evaporation Upflows, and Acceleration Sites. *Markus J. Aschwanden & Arnold O. Benz.* 480, 825 (1997)

On the Subphotospheric Origin of Coronal Electric Currents. *Alexei A. Pevtsov, Richard C. Canfield, & Alexander N. McClymont.* 481, 973 (1997)

Imaging the Chromospheric Evaporation of the 1994 June 30 Solar Flare. *Adriana V. R. Silva, Haimin Wang, Dale E. Gary, Nariaki Nitta, & Harold Zirin.* 481, 978 (1997)

What Is the Spatial Relationship between Hard X-Ray Footpoints and Vertical Electric Currents in Solar Flares? *Jing Li, Thomas R. Metcalf, Richard C. Canfield, Jean-Pierre Wülser, & Takeo Kosugi.* 482, 490 (1997)

Coronal Heating and the Vertical Temperature Structure of the Quiet Corona. *M. S. Wheatland, P. A. Sturrock, & L. W. Acton.* 482, 510 (1997)

Neutral-Line Magnetic Shear and Enhanced Coronal Heating in Solar Active Regions. *D. A. Falconer, R. L. Moore, J. G. Porter, G. A. Gary, & T. Shimizu.* 482, 519 (1997)

SURVEYS

- The Canada-France-Hawaii Telescope Imaging Survey of BL Lacertae Objects. II. Clustering Environments. *Ron Wurtz, John T. Stocke, E. Ellingson, & H. K. C. Yee.* 480, 547 (1997)
- A Wide-Field K-Band Survey: The Luminosity Function of Galaxies. *J. P. Gardner, R. M. Sharples, C. S. Frenk, & B. E. Carrasco.* 480, L99 (1997)
- Gas-rich Dwarf Galaxies from the Second Palomar Sky Survey. II. Optical Properties. *Rachel A. Pildis, James M. Schombert, & Jo Ann Eder.* 481, 157 (1997)
- The Multiplicity of Pre-Main-Sequence Stars in Southern Star-forming Regions. *A. M. Ghez, D. W. McCarthy, J. L. Patience, & T. L. Beck.* 481, 378 (1997)
- The Evolution of the Distribution of Star Formation Rates in Galaxies. *Lennox L. Cowie, Esther M. Hu, Antoinette Songaila, & Eiichi Egami.* 481, L9 (1997)
- Keck Spectroscopy of Redshift $z \sim 3$ Galaxies in the Hubble Deep Field. *James D. Lowenthal, David C. Koo, Rafael Guzmán, Jesús Gallego, Andrew C. Phillips, S. M. Faber, Nicole P. Vogt, Garth D. Illingworth, & Caryl Gronwall.* 481, 673 (1997)
- Radio Continuum Measurements of Southern Early-Type Stars. II. A Distance-limited Sample of Wolf-Rayet Stars. *Claus Leitherer, Jessica M. Chapman, & Bärbel Koribalski.* 481, 898 (1997)
- M Dwarfs from Hubble Space Telescope Star Counts. III. The Groth Strip. *Andrew Gould, John N. Bahcall, & Chris Flynn.* 482, 913 (1997)

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- Multifrequency, High-Resolution Radio Recombination Line Observations of the Massive Star-forming Region W49A. *C. G. De Pree, David M. Mehringer, & W. M. Goss.* 482, 307 (1997)
- Millimeter and Radio Interferometry of Herbig Ae/Be Stars. *James Di Francesco, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Stephane Guilloteau, & Claire J. Chandler.* 482, 433 (1997)
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- A Comparison of the Near-Infrared and Visible Spectra of Three Bright Cepheids. *R. Paul Butler & Roger A. Bell.* 480, 767 (1997)
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TURBULENCE

- A Universal Formation Mechanism for Open and Globular Clusters in Turbulent Gas. *Bruce G. Elmegreen & Yuri N. Efremov.* 480, 235 (1997)
- The Protogalactic Origin for Cosmic Magnetic Fields. *Russell M. Kulsrud, Remyu Cen, Jeremiah P. Ostriker, & Dongsu Ryu.* 482, 156 (1997)
- Tiny-Scale Atomic Structure and the Cold Neutral Medium. *Carl Heiles.* 481, 193 (1997)
- Nonclassical Theory of Turbulent Collisionless Plasmas. *L. L. Williams.* 481, 515 (1997)
- The Effects of Velocity Correlation Times on the Turbulent Amplification of Magnetic Energy. *Benjamin D. G. Chandran.* 482, 156 (1997)
- The MHD Kelvin-Helmholtz Instability. II. The Roles of Weak and Oblique Fields in Planar Flows. *T. W. Jones, Joseph B. Gaalaas, Dongsu Ryu, & Adam Frank.* 482, 230 (1997)
- Compressible Turbulence. *V. M. Canuto.* 482, 827 (1997)

ULTRAVIOLET: GALAXIES

- Ultraviolet Signatures of Tidal Interaction in the Giant Spiral Galaxy M101. *William H. Waller, Ralph C. Bohlin, Robert H. Cornett, Michael N. Fanelli, Wendy L. Freedman, Jesse K. Hill, Barry F. Madore, Susan G. Neff, Joel D. Offenberg, Robert W. O'Connell, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 481, 169 (1997)
- An Ultraviolet and Near-Infrared View of NGC 4214: A Starbursting Core Embedded in a Low Surface Brightness Disk. *Michael N. Fanelli, William W. Waller, Denise A. Smith, Wendy L. Freedman, Barry Madore, Susan G. Neff, Robert W. O'Connell, Morton S. Roberts, Ralph Bohlin, Andrew M. Smith, & Theodore P. Stecher.* 481, 735 (1997)
- On the Nature of Ultraviolet and X-Ray Absorption in NGC 3783. *Joseph C. Shields & Fred Hamann.* 481, 752 (1997)
- Hubble Space Telescope Imaging of the Central 1 Kiloparsec of M81. *Nick Devereux, Holland Ford, & George Jacoby.* 481, L71 (1997)
- A Powerful Nuclear Starburst in the Seyfert Galaxy Markarian 477: Implications for the Starburst-Active Galactic Nucleus Connection. *T. M. Heckman, R. González-Delgado, C. Leitherer, G. R. Meurer, J. Krolik, A. S. Wilson, A. Koratkar, & A. Kinney.* 482, 114 (1997)
- Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. *E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Tutaruk, & C. von Montigny.* 482, 167 (1997)
- Lyman-Alpha Absorption Lines from Minipancakes. *Biman B. Nath.* 482, 621 (1997)
- On the Ultraviolet-bright Phase of Metal-rich Horizontal-Branch Stars. *Sukyoung Yi, Pierre Demarque, & Yong-Cheol Kim.* 482, 677 (1997)
- A Far-Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies. *Thomas M. Brown, Henry C. Ferguson, Arthur F. Davidsen, & Ben Dorman.* 482, 685 (1997)

ULTRAVIOLET: ISM

- The Neutral Hydrogen Abundance and Ionization in the Inner Heliosphere. *O. Puyoo, L. Ben Jaffel, & C. Emerich.* 480, 262 (1997)
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- Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. *V. Mennella, G. A. Baratta, L. Colangeli, P. Palumbo, A. Rotundi, E. Bussolotti, & G. Strazzulla.* 481, 545 (1997)
- Radiative Transfer Analysis of Far-Ultraviolet Background Observations Obtained with the Far Ultraviolet Space Telescope. *Adolf N. Witt, Brian C. Friedmann, & Timothy P. Sasseen.* 481, 809 (1997)
- Interpretation of Ultraviolet Absorption Lines in SN 1006. *A. J. S. Hamilton, R. A. Fesen, C.-C. Wu, D. M. Crenshaw, & C. L. Sarazin.* 481, 838 (1997)
- Carbon in the Diffuse Interstellar Medium. *Ulysses J. Sofia, Jason A. Cardelli, Kenneth P. Guerin, & David M. Meyer.* 482, L105 (1997)
- The Ultraviolet Spectrum of a Face-on Shock Wave in the Vela Supernova Remnant. *John C. Raymond, William P. Blair, Knox S. Long, Olaf Vancura, Richard J. Edgar, Jon Morse, Patrick Hartigan, & Wilton T. Sanders.* 482, 881 (1997)
- The Abundance of Mg in the Interstellar Medium. *Edward L. Fitzpatrick.* 482, L199 (1997)

ULTRAVIOLET: STARS

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- UIT Detection of Hot Stars in the Globular Cluster NGC 362. *Ben Dorman, Ronak Y. Shah, Robert W. O'Connell, Wayne B. Landsman, Robert T. Rood, Ralph C. Bohlin, Susan G. Neff, Morton S. Roberts, Andrew M. Smith, & Theodore P. Stecher.* 480, L31 (1997)
- Chromospheric Emission in Metal-poor Solar-Type Stars. *Ruth C. Peterson & Carolus J. Schrijver.* 480, L47 (1997)
- Hot White Dwarfs in the Extreme Ultraviolet Explorer Survey. II. Mass Distribution, Space Density, and Population Age. *Stéphane Vennes, Peter A. Thejll, Ricardo Génova Galván, & Jean Dupuis.* 480, 714 (1997)
- Wide Field Planetary Camera 2 Photometry of the Bright, Mysterious White Dwarf Procyon B. *J. L. Provencal, H. L. Shipman, F. Wesemael, P. Bergeron, H. E. Bond, James Liebert, & E. M. Sion.* 480, 777 (1997)

- Hubble Space Telescope Beryllium Abundances in the α Centauri System.* F. Primas, D. K. Duncan, M. H. Pinsonneault, Constantine P. Deliyannis, & J. A. Thorburn. 480, 784 (1997)
- Dynamic Processes in Be Star Atmospheres. V. Helium Line Emissions from the Outer Atmosphere of λ Eridani. Myron A. Smith, D. H. Cohen, I. Hubeny, K. Plett, G. Basri, C. M. Johns-Krull, J. J. MacFarlane, & R. Hirata. 481, 467 (1997)
- Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata. 481, 479 (1997)
- Detection of β Pictoris-like Gaseous Infall in 2 Andromedae. K.-P. Cheng, Fred C. Bruhweiler, & James E. Neff. 481, 866 (1997)
- S1040 in M67: A Post-Mass Transfer Binary with a Helium Core White Dwarf. W. Landsman, J. Aparicio, P. Bergeron, R. Di Stefano, & T. P. Stecher. 481, L93 (1997)
- Optical Spectroscopy of EZ Canis Majoris: Indication for Large-Scale Structures in a Wolf-Rayet Wind. Thierry Morel, Nicole St-Louis, & Sergey V. Marchenko. 482, 470 (1997)
- Final Astro-1 Calibration of the Hopkins Ultraviolet Telescope: A Test of White Dwarf Model Atmospheres as Far-Ultraviolet Calibration Standards. Jeffrey W. Kruk, Randy A. Kimble, Richard H. Buss, Jr., Arthur F. Davidsen, Samuel T. Durrance, David S. Finley, J. B. Holberg, & Gerard A. Kriss. 482, 546 (1997)
- The Accreting White Dwarf in the Close Binary EUVE J1016-053. S. Vennes, J. Dupuis, S. Bowyer, & A. K. Pradhan. 482, L73 (1997)
- Electron Densities in the Solar Polar Coronal Holes from Density Sensitive Line Ratios of Si VIII and Si X. G. A. Doschek, H. P. Warren, J. M. Laming, J. T. Mariska, K. Wilhelm, P. Lemaire, U. Schühle, & T. G. Moran. 482, L109 (1997)
- ### WAVES
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- ### X-RAYS: BURSTS
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- The Nature of the Fluctuations Preceding the Giant Bursts in the Bursting Pulsar GRO J1744-28. John K. Cannizzo. 482, 178 (1997)
- Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou. 482, L53 (1997)
- ### X-RAYS: GALAXIES
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- Measurement of the Hubble Constant from X-Ray and 2.1 Millimeter Observations of Abell 2163. W. L. Holzapfel, M. Arnaud, P. A. R. Ade, S. E. Church, M. L. Fischer, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange. 480, 449 (1997)
- On the Soft X-Ray Spectra of γ -loud Blazars. Andrea Comastri, Giovanni Fossati, Gabriele Ghisellini, & Silvano Molendi. 480, 534 (1997)
- Variability in the Inverse-Compton X-Ray Flux from the Jet in Quasar 3C 345. S. C. Unwin, A. E. Wehrle, A. P. Lobanov, J. A. Zensus, G. M. Madejski, M. F. Aller, & H. D. Aller. 480, 596 (1997)
- Limits on the Peculiar Velocities of Two Distant Clusters Using the Kinematic Sunyaev-Zeldovich Effect. W. L. Holzapfel, P. A. R. Ade, S. E. Church, P. D. Mauskopf, Y. Rephaeli, T. M. Wilbanks, & A. E. Lange. 481, 35 (1997)
- Infrared Response of H₂ to X-Rays in Dense Clouds. S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno. 481, 282 (1997)
- Evidence for Nonlinear X-Ray Variability from the Broad-Line Radio Galaxy 3C 390.3. Karen M. Leighly & Paul T. O'Brien. 481, L15 (1997)
- Concordance of X-Ray Cluster Data with Big Bang Nucleosynthesis in Mixed Dark Matter Models. Russell W. Strickland & David N. Schramm. 481, 571 (1997)
- Evolution in the X-Ray Cluster Luminosity Function Revisited. R. C. Nichol, B. P. Holden, A. K. Romer, M. P. Ulmer, D. J. Burke, & C. A. Collins. 481, 644 (1997)
- Structure of the X-Ray-emitting Gas in the Hydra A Cluster of Galaxies. Y. Ikebe, K. Makishima, H. Ezawa, Y. Fukazawa, M. Hirayama, H. Honda, Y. Ishisaki, K. Kikuchi, H. Kubo, T. Murakami, T. Ohashi, T. Takahashi, & K. Yamashita. 481, 660 (1997)
- On the Nature of Ultraviolet and X-Ray Absorption in NGC 3783. Joseph C. Shields & Fred Hamann. 481, 752 (1997)
- X-Ray Properties of Early-Type Galaxies as Observed with ASCA. H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita. 482, 133 (1997)
- X-Ray Emission from the Fornax Cluster. C. Jones, C. Stern, W. Forman, J. Breen, L. David, W. Tucker, & M. Franx. 482, 143 (1997)
- Contemporaneous IUE, EUVE, and High-Energy Observations of 3C 273. E. Ramos, M. Kafatos, A. Fruscione, F. C. Bruhweiler, I. M. McHardy, R. C. Hartman, L. G. Titarchuk, & C. von Montigny. 482, 167 (1997)
- The Luminosity-Temperature Relation at $z = 0.4$ for Clusters of Galaxies. R. F. Mushotzky & C. A. Sarf. 482, L13 (1997)
- Weak Gravitational Lensing and X-Ray Analysis of Abell 2163. G. Squires, D. M. Neumann, N. Kaiser, M. Arnaud, A. Babul, H. Böhringer, G. Fahlman, & D. Woods. 482, 648 (1997)
- ### X-RAYS: GENERAL
- Probing Galactic Center Black Hole Candidates with Far-Infrared Spectroscopy. Philip R. Maloney, Sean W. J. Colgan, & David J. Hollenbach. 482, L41 (1997)
- Postburst Quasi-periodic Oscillations from GRO J1744-28 and from the Rapid Burster. Jefferson M. Kommers, Derek W. Fox, Walter H. G. Lewin, Robert E. Rutledge, Jan van Paradijs, & Chryssa Kouveliotou. 482, L53 (1997)
- Phase Difference and Coherence as Diagnostics of Accreting Compact Sources. Xin-Min Hua, Demosthenes Kazanas, & Lev Titarchuk. 482, L57 (1997)
- ### X-RAYS: ISM
- Supernova Remnants Associated with Molecular Clouds in the Large Magellanic Cloud. Kenneth R. Banas, John P. Hughes, L. Bronfman, & L.-Å. Nyman. 480, 607 (1997)
- Infrared Response of H₂ to X-Rays in Dense Clouds. S. Tiné, S. Lepp, R. Gredel, & A. Dalgarno. 481, 282 (1997)
- Hard X-Ray Emission from the Galactic Ridge. N. Y. Yamasaki, T. Ohashi, F. Takahara, S. Yamauchi, K. Koyama, T. Kamae, H. Kameda, K. Makishima, Y. Sekimoto, M. Hirayama, T. Takahashi, T. Yamagami, S. Gunji, T. Tamura, S. Miyazaki, & M. Nomachi. 481, 821 (1997)
- ROSAT PSPC Observation of the Northeast Region of the Vela Supernova Remnant. II. Spectral Analysis with a Nonequilibrium of Ionization Emission Model. F. Bocchino, A. Maggio, & S. Sciortino. 481, 872 (1997)
- X-Ray Properties of Early-Type Galaxies as Observed with ASCA. H. Matsumoto, K. Koyama, H. Awaki, T. Tsuru, M. Loewenstein, & K. Matsushita. 482, 133 (1997)
- High-Resolution X-Ray Image of the Hydrogen-deficient Planetary Nebula Abell 30. You-Hua Chu, Thomas H. Chang, & Gail M. Conway. 482, 891 (1997)
- ### X-RAYS: STARS
- X-Ray Ionization of Protoplanetary Disks. A. E. Glassgold, J. Najita, & J. Igea. 480, 344 (1997)
- The ASCA Spectrum of the Vela Pulsar Jet. Craig B. Markwardt & Hakki B. Ogelman. 480, L13 (1997)
- Discovery of a New Soft X-Ray Excess in the Spectrum of EXO 0748-676. Brian Thomas, Robin Corbet, Alan P. Smale, Kazumi Asai, & Tadayasu Dotani. 480, L21 (1997)
- Strong-Field General Relativity and Quasi-periodic Oscillations in X-Ray Binaries. Philip Kaaret, Eric C. Ford, & Kaiyou Chen. 480, L27 (1997)
- The Cessation of Flickering during Dips in Cygnus X-1. M. Batucinska-Church, T. Takahashi, Y. Ueda, M. J. Church, T. Dotani, K. Mitsuda, & H. Inoue. 480, L115 (1997)
- Are Coronae of Magnetically Active Stars Heated by Flares? Manuel Güdel. 480, L121 (1997)

- The Molecular Cloud near the Hard X-Ray Source 1E 1740.7–2942. *Min Yan & A. Dalgarno*. 481, 296 (1997)
- Dynamic Processes in Be Star Atmospheres. VI. Simultaneous X-Ray, Ultraviolet, and Optical Variations in λ Eridani. *Myron A. Smith, T. Murakami, H. Ezuka, B. G. Anandarao, A. Chakraborty, M. F. Corcoran, & R. Hirata*. 481, 479 (1997)
- Torque Reversal in Accretion-powered X-Ray Pulsars. *Insu Yi, J. Craig Wheeler, & Ethan T. Vishniac*. 481, L51 (1997)
- The Formation of Low-Mass Transient X-Ray Binaries. *A. R. King & U. Kolb*. 481, 918 (1997)
- Harmonic Coupling of the Red Noise in X-Ray Pulsars. *L. Burderi, N. R. Robba, N. La Barbera, & M. Guainazzi*. 481, 943 (1997)
- On the Correlation of Torque and Luminosity in GX 1+4. *Deepto Chakraborty, Lars Bildsten, Mark H. Finger, John M. Grunsfeld, Danny T. Koh, Robert W. Nelson, Thomas A. Prince, Brian A. Vaughan, & Robert B. Wilson*. 481, L101 (1997)
- Low-Mass Normal-Matter Atmospheres of Strange Stars and Their Radiation. *Vladimir V. Usov*. 481, L107 (1997)
- The Structure of Cooling Fronts in Accretion Disks. *Ethan T. Vishniac*. 482, 414 (1997)
- Advection-dominated Accretion Model of the Black Hole V404 Cygni in Quiescence. *Ramesh Narayan, Didier Barret, & Jeffrey E. McClintock*. 482, 448 (1997)
- Discovery of Two Simultaneous Kilohertz Quasi-periodic Oscillations in KS 1731–269. *Rudy A. D. Wijnands & Michiel van der Klis*. 482, L65 (1997)
- Time-Resolved Ultraviolet Observations of the Globular Cluster X-Ray Source in NGC 6624: The Shortest Known Period Binary System. *Scott F. Anderson, Bruce Margon, Eric W. Deutsch, Ronald A. Downes, & Richard G. Allen*. 482, L69 (1997)
- RXTE Observations of QPOs in the Black Hole Candidate GRS 1915+105. *E. H. Morgan, R. A. Remillard, & J. Greiner*. 482, 993 (1997)
- Black Hole Spin in X-Ray Binaries: Observational Consequences. *S. N. Zhang, Wei Cui, & Wan Chen*. 482, L155 (1997)
- ASCA Observations of PSR 1929+10 and PSR 0950+08. *F. Y.-H. Wang & J. P. Halpern*. 482, L159 (1997)
- Evidence for "Propeller" Effects in X-Ray Pulsars GX 1+4 and GRO J1744–28. *Wei Cui*. 482, L163 (1997)
- Neutron Star Masses and Radii as Inferred from Kilohertz Quasi-periodic Oscillations. *W. Zhang, T. E. Strohmayer, & J. H. Swank*. 482, L167 (1997)
- Discovery of Optical Pulsations in V2116 Ophiuchi = GX 1+4. *Francisco J. Jablonski, Marildo G. Pereira, João Braga, & Clemens D. Gneiding*. 482, L171 (1997)